(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
14 March 2002 (14.03.2002)

PCT

(10) International Publication Number
WO 02/21379 A1

(51) International Patent Classification[7]: G06F 17/60

(21) International Application Number: PCT/US01/27412

(22) International Filing Date:
5 September 2001 (05.09.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
09/655,057 5 September 2000 (05.09.2000) US

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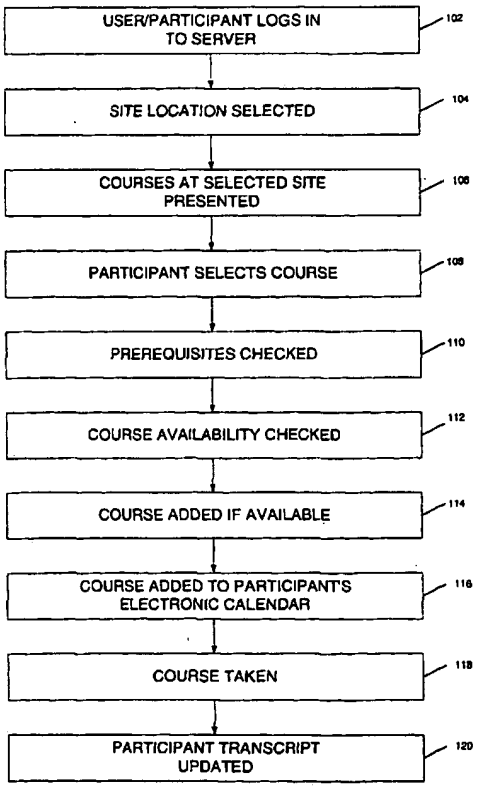
(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF,

[Continued on next page]

(54) Title: INTEGRATED ON-LINE COURSE REGISTRATION SCHEDULING PARTICIPANT TRANSCRIPT AND ADMINISTRATIVE MONITORING SYSTEM



(57) Abstract: An online course registration and monitoring system for a company training program enables an employee participant to register for courses through a server that accesses a database of available courses and participant transcripts. A listing of available courses is presented (106) to the participant over the network to enable the participant to register (114) for one or more of the available courses and to have an online transcript updated (120) on completion of the course. An administrative level employee may access the online transcript to monitor progress of the participant. The system provides a waiting list for each course, alerts regarding availability of courses, and alerts regarding changes to courses. The system also automatically updates an electronic calendar (116) maintained by the participant and verifies the participant's availability to attend the course from information stored on the electronic calendar prior to enabling the participant to register for the course. The system reviews the transcript of the participant to verify completion of any perequisites (110) for the course prior to enabling registration.

WO 02/21379 A1

CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTEGRATED ONLINE COURSE REGISTRATION SCHEDULING PARTICIPANT TRANSCRIPT AND ADMINISTRATIVE MONITORING SYSTEM

Field of the Invention

The invention relates to an on-line course registration system for an employee participant within a company training program whereby an electronic calendar for the participant is automatically updated when the participant registers for a course offered by the system and an on-line transcript is maintained to verify that any prerequisites for the course have been satisfied by the participant prior to enrollment in the course. The invention also enables instructors and supervisors to monitor the progress of employees through the company training program.

Background of the Invention

Many companies today offer their employees the opportunity to participate in various company-sponsored training programs. In a large corporation that has many divisions, management of such a company training program can be very complicated. Particularly, the corporation may have numerous facilities at which its employees work and desire to receive training. Accordingly, it is often necessary for the training program to offer a same course at many different facilities to enable the employees at each different facility to obtain and receive training on a particular topic covered in the same course. Managing such a complicated company training program has been a challenge for many years. Although some systems and processes exist to enable companies to manage their company training programs, such existing systems and processes suffer from many drawbacks.

For example, some corporations maintain a web site-based system that provides a listing of courses offered by the corporation to its employees. Employees may visit the web site and register on-line to participate in a course offered by the corporation in a company training program. This web site-based system suffers from many drawbacks. For example, if a course has to be changed, the entire web site or pages on which that course is listed within the web site often must be changed to accommodate the change in the course. This can be time consuming as courses change frequently in many instances. Furthermore, many courses have one or more prerequisites. For example, if a training course is being offered on Microsoft Word™ advanced topics, a first level or a beginners

Microsoft Word™ course may be considered a prerequisite to enrollment in the Microsoft Word™ advanced topics course. In existing systems, an on-line registration web site does not monitor or maintain records to verify that an employee has qualified and obtained the necessary prerequisites in order to be enrolled in a requested course.

Additionally, an employee may initially register for a course on an on-line web site-based system, but due to a later conflict, the employee may need to cancel his/her registration. However, the employee may not have a means to go back to the web site-based system to cancel his/her registration to enable other employees to register for the course instead. Many other drawbacks exist with existing systems.

Summary of the Invention

It is therefore an object of the present invention to overcome these and other drawbacks of prior systems.

An additional object to the present invention is to provide an on-line course registration system and process that leverages a database containing data relating to a plurality of courses and a plurality of employee participants to enable an administrator and the employee participants to maximize the benefits of the on-line course registration system. The online course registration process of the present invention includes the steps of providing an automatic update to an electronic calendar for each of the participants, monitoring a transcript maintained by the database for each of the participants to verify that one or more prerequisites have been achieved prior to enrollment in a course requested by the participant, maintaining a waiting list for each of the courses, and enabling a first participant to cancel a requested course and to thereby automatically notify another participant on the waiting list for the course when he/she has been removed from the waiting list and enrolled in the course cancelled by the first participant and other features.

Another object of the present invention is to provide an on-line course registration system whereby an administrator may monitor the progress of a plurality of participants through an on-line transcript maintained for each of the participants.

Another object of the present invention is to provide an on-line course registration system for a plurality of employee participants of a company that enables each of the participants to choose a location and one or more courses and to check an electronic

calendar to verify that he/she is available at a time selected for the chosen one or more courses so that a cancellation of a chosen course is less likely.

Another object of the present invention is to provide an on-line course registration system whereby a participant and an administrator alike can monitor progress of the participant as the participant achieves a plurality of goals through using a listing of course goals to be achieved in a period of time by the participant.

Additional objects and advantages of the invention will be set forth in part in the description which follows, and in part will be obvious from the description or may be learned by practice of the invention. The objects and advantages of the invention may be realized and attained by means of the instrumentalities and combinations particularly pointed out in the appended claims.

To achieve the objects and in accordance with the purpose of the invention, as embodied and broadly described herein, this invention, in one aspect, includes a server system accessible over one or more networks by a plurality of participants to enable each of the participants to register for one or more courses in a company training program, the server system connected to a database that stores course data and participant data, the participant data including a participant profile and a participant transcript. The server system comprises a course presentation module that presents a graphical user interface to a participant to enable the participant to view a listing of available courses offered in the company training program by a location, the course presentation module accessing the course data in the database to generate contents of a graphical user interface page upon selection of a location by the participant; a course registration module that presents a second graphical user interface to the participant that enables the participant to select and register for a course for which the participant desires to be registered from the listing of available courses in the course presentation module; a participant transcript module that updates the participant transcript for the participant upon completion of the registered course by the participant; and an administration access module that enables a plurality of administration level employees to monitor the participant transcripts.

In another aspect, the invention comprises a process of enabling a plurality of participants to register for one or more courses in a company training program by connecting to a server system over a network and wherein the server system maintains a database that stores course data and participant data, the participant data including a

participant profile and a participant transcript. The process comprises the steps of presenting a graphical user interface to a participant to enable the participant to view a listing of available courses offered in the company training program by a location, the contents of the graphical user interface being generated by accessing the course data in the database upon selection of the location by the participant; presenting a second graphical user interface to the participant that enables the participant to select a course for which the participant desires to be registered; updating the participant transcript for the participant upon completion by the participant of the registered course; and enabling a plurality of administrative level employees to monitor the participant transcripts.

According to another embodiment of the present invention, an online course registration and monitoring system accessible over a network is provided for a company training program that enables a plurality of employee participants to register for courses through a server that accesses a database of available courses and participant transcripts. A listing of available courses is presented to the participants over the network to enable each of the participants to register for one or more of the courses and to have an online transcript updated upon completion of the registered course. A plurality of administrative level employees may access the online transcripts to monitor progress of the participants. The online course registration and monitoring system provides for a plurality of each of wait lists, alerts regarding availability, and alerts regarding changes to courses. Upon registration of a participant for one of the courses, the system also automatically updates an electronic calendar maintained by the participant and verifies the participant's availability to attend the registered course from information stored on the electronic calendar prior to enabling the participant to register for the course. The system reviews an online transcript for the participant to verify completion of one or more prerequisites required by the registered course prior to enabling the participant to register for the course.

The accompanying drawings, which are incorporated in and constitute a part of this specification, illustrate several embodiments of the invention and, together with the description, serve to explain the principles of the invention.

Brief Description of the Drawings

Figure 1 depicts a process of participant registration in an on-line course registration and management system according to one embodiment of the present invention.

Figure 2 depicts a schematic block diagram of an on-line registration system for a company training course for use by employee participants according to an embodiment of the present invention.

Figure 3 depicts a course server system according to an embodiment of the present invention.

Figure 4 depicts a process whereby a plurality of participants that have registered for a course are notified of one or more changes in the registered course according to an embodiment of the present invention.

Figure 5 depicts an introductory graphical user interface seen by an administration level employee according to an embodiment of the present invention.

Figure 6A depicts an introductory course site selection screen according to an embodiment of the present invention.

Figure 6B depicts a course selection screen based on a selection of a particular site according to an embodiment of the present invention.

Figure 7 depicts a course description screen according to an embodiment of the present invention.

Figure 8A depicts an introductory registration screen prompted upon selection of a course according to an embodiment of the present invention.

Figure 8B depicts a profile verification screen according to an embodiment of the present invention.

Figure 9 depicts a course selection verification screen according to an embodiment of the present invention.

Figure 10 depicts a registration confirmation screen according to an embodiment of the present invention.

Figure 11 depicts an email verification message screen according to an embodiment of the present invention.

Figure 12 depicts an enrollment and transcript screen for a particular participant according to an embodiment of the present invention.

Figure 13 depicts a profile maintenance screen whereby a participant can update or create a profile according to an embodiment of the present invention.

Figure 14 depicts an administration screen showing a master course listing with a menu of functions enabling an administrative level employee to change, modify, create and delete a course in the master course listing according to an embodiment of the present invention.

Figure 15 depicts an administrator screen enabling an administrative level employee to edit a course according to an embodiment of the present invention.

Figure 16 depicts a master course schedule listing screen enabling a participant to choose to view a course based upon when the course is to occur and by a location according to an embodiment of the present invention.

Figure 17 depicts a course roster screen for a particular course, whereby an administrative level employee may modify the course roster based on new prerequisites, information provided by participants about cancellations, additions or deletions, and other information according to an embodiment of the present invention.

Detailed Description of the Invention

Reference will now be made in detail to the present preferred embodiments of the invention, examples of which are illustrated in the accompanying drawings in which like reference characters refer to corresponding elements.

The present invention provides a system whereby a plurality of participants, such as a plurality of employees of a corporation, may register on-line for one or more courses offered through a training program at the corporation's training facilities. This is a particularly useful system in which multiple sites of the corporation may access the system and is useful in situations where many divisions of the corporation desire to offer the same training program. By providing a common system, a plurality of employee participants from the many divisions of the corporation may obtain the benefits of attending the courses offered at the different divisions or locations rather than relying exclusively on courses offered internally within an employee participant's particular division of the corporation.

The system also makes it easier for a plurality of administrative level employees (*i.e.*, administrators) to create, edit and modify the courses by using a database system in

which a graphical user interface for a listing of available courses offered to the participants is based on contents of a database within the database system, rather than upon a hard-coded HTML page. Accordingly, when it is desired to change a course included in the listing of available courses, the contents of the database are changed, rather than a HTML page. Furthermore, the present invention provides an advantage of automatically updating a participant's electronic calendar when the participant registers for a course, thereby creating a reminder for the registered course and also verifying that a time and a place for the registered course is available. The system also checks one or more prerequisites stored by a creator of a course to verify that the participant has achieved all of the prerequisites for the registered course. In such a manner, a number of slots on a roster for the course are filled only by acceptable participants who have satisfied the prerequisites for the course thereby efficiently filling the slots on the roster for the course.

Fig. 1 depicts a process whereby a participant signs up for a course according to an embodiment of the present invention, such as a course in a system depicted in Figs. 2 and 3. Specifically, a process 100 is depicted in Fig. 1 in which a user/participant logs in to a server over a network in step 102. For example, as depicted in Fig. 2, the participant may log in to a course server system 16 from a participant system 12 connected over a network 14. According to one embodiment of the present invention, the participant system 12 may comprise a browser-enabled personal computer connected over an intranet or the Internet (*e.g.*, a secure HTTP connection over the Internet to a company server) to the course server system 16, which can be comprised of a web server connected to a back end data processing server. It should be appreciated that the participant system 12 may also be any other type of device that enables access to information over a network whether wireless or wired, including a PDA, a mobile phone, a pager, a laptop computer, *etc.* Also, although the network 14 may preferably be an intranet or a secure Internet connection, it may also be a local area network (LAN), a wide area network (WAN), a BlueTooth connection, or any other network connection or combination thereof that enables a participant to log in to a server and access data.

Once the participant has logged into the course server system 16 in step 102 of process 100, the participant selects a site location at which the participant desires to attend a training course in step 104. In order to log into the course server system 16 in

step 102, the course server system 16 may require that the participant be registered and that a profile be created for that participant. Specifically, logging in may require that a combination of a participant name, and a password be specified by the participant prior to granting access to the contents of the data on the course server system 16. This restricts access and verifies that the participant has created a profile and a transcript, which can later be used for monitoring the participant's selection of courses throughout the course server system 16. If the participant has not previously registered with the course server system 16, the participant is taken through a registration process as described in more detail below. If the participant has already registered with the course server system 16, then the participant is prompted for the participant's name and password to thereby gain access to the course server system 16 and continue course selection and registration. Specifically, once access to the course server system 16 is granted, the participant may continue course selection and registration through a graphical user interface presented by the course server system 16 to the participant. The graphical user interface presented may enable the participant to choose a site location at which to take a course.

Once the participant has selected the site location at which the participant would like to take a course, a listing of one or more courses available at the selected site location are presented in step 106. In one embodiment, a listing of all courses available at the selected site location may be presented to the participant, although it may also be possible to present a listing of only those courses available to the participant based on an assessment of the participant's profile. For example, a plurality of courses only available to certain types of managerial level employees of the corporation may be presented only to a managerial level employee participant based on the participant profile designating the participant as a managerial level employee. Also, a transcript for the participant may be accessed to verify that the participant is able to take a course before presenting the course. Additional details of this system are provided below.

Next, in step 108, the participant selects a course from the listing of available courses and then the course server system 16 checks for one or more prerequisites for the selected course in step 110. If the one or more course prerequisites have been satisfied by the participant based on the participant's transcript, then the course availability is checked in step 112. Specifically, for each course, a roster is maintained indicating a number of participants who may take the course based on a location where the course will be

conducted and any other limits placed on the course. If a participant slot is available for the selected course based on the roster information in the course database 20, then, in step 114, the selected course is added to the participant's transcript as a registered course and the course database is updated to indicate that another participant has been added to the roster for the course and to add the participant's identity to the roster for the registered course. Next, in step 116, the registered course is added to an electronic calendar for the participant such that a date, a location, and one or more class times for the registered course are specified in the participant's electronic calendar for later use. Next, in step 118, the registered course is taken by the participant, and the participant's transcript is updated in step 120 upon completion of the registered course so that the participant may apply for a later course requiring the completed registered course as a prerequisite.

As mentioned above, Figure 2 depicts an embodiment of a course registration system 10 according to the present invention comprising the plurality of participant systems 12 connected over the network 14 to the course server system 16. Also, a plurality of administrator systems 24 are connected over the network 14 to the course server system 16. It should be appreciated that a plurality of administrators (or administrative level employees of the corporation) and a plurality of employee participants may connect to the course server system 16 over a plurality of different networks such that network 14 need not be limited to a single network, but may be comprised of a variety of different networks 14 all connected to the course server system 16. For example, a participant system 12 may connect over an HTTP Internet connection to the course server system 16 whereas an administrator system 24 may connect to the course server system 16 via a LAN. The course server system 16 is connected to one or more course database systems 18. The one or more course database systems 18 may each comprise a course database 20 and a participant database 22. Alternatively, one database system 18 may comprise the course database 20 and another database system 18 may comprise the participant database 22.

The course server system 16 may comprise a plurality of modules to be able to carry out the necessary functionality for the course registration system 10. As described in more detail below, and as illustrated in Fig. 3, the course server system 16 may comprise one or more of the following modules: a participant registration module 50, a participant log-in module 52, a course presentation module 54, a course

creation/modification module 56, a course registration module 58, an alert module 60, a participant calendar update module 62, a transcript module 64, a course search module 66, a wait-list module 68, and an administration menu module 70.

The participant registration module 50 may perform the functions ordinarily associated with a registration system for a web site and other similar on-line systems. The participant registration module 50 may be responsible for keeping and maintaining a database containing a plurality of participant names and a plurality of passwords (each of the passwords associated with one of the participant names) and may also issue a participant name and a password when a new participant accesses the course server system 16 to participate in one or more courses. Additionally, the participant registration module 50 may be responsible for obtaining information from each participant upon initial registration and/or may allow each participant to modify the initial registration information that is maintained by the course server system 16. Specifically, as described above, and in more detail below, a graphical user interface may be presented by the participant registration module 50 upon a request for information by a participant who desires to participate in a course offered through the course server system 16.

Fig. 13 depicts an embodiment of a graphical user interface 952 output by the participant registration module 50 to enable a participant to create a profile and/or revise a previously-created profile. The graphical user interface 952 comprises a number of inputs and buttons that allow the participant to input data and create a profile. The graphical user interface 952 may comprise a submit button 954 and a cancel button 956 to enable the participant to navigate to one or more other screens within the course server system 16 web site. Additionally, a plurality of other input fields may be provided, including the following: a log-in I.D. input field 958, a first name field 960, a middle name field 962, a last name field 964, an email address field 966, a cost center field 968, a phone number field 970, an internal communication number field 972, an administration level field 974, a password field 976, a business street address field 978, a city field 980, a state field 982, a zip code field 984, a country field 985, a company business drop down selection portion 986, a business location drop down portion 988, a department drop down portion 990, and a computer identity portion 992. These input fields may be used to create a profile and a transcript for each participant desiring to participate in a course offered through this course server system 16. The administration level field 974 may be a

company internal level field established for an access authorization level to determine whether an employee of the corporation has authorization to access a particular participant's profile and/or transcript. Additionally, in a corporation with a lot of different business units, the company business drop down selection portion 986 may be provided to enable the participant to select the business unit in which the participant is employed. Further, because each of the business units within the corporation and the corporation itself may have many locations, the business location drop down portion 988 may be provided. A department may also be input by the participant through the department drop down portion 990 to create a more specific profile for the participant. Upon interacting with the participant and verifying the contents of the various input fields, the participant registration module 50 then creates a profile for the participant or updates an existing profile for the participant within the participant database 22 as shown in Fig. 2.

The participant log in module 52 (shown in Fig. 3) may be provided to perform a plurality of login functions when the participant connects over the network 14 to the course server system 16. In one embodiment, an introductory graphical user interface may be presented by the course server system 16 to every participant that accesses the course server system 16 through the network 14. An embodiment of an initial screen for the graphical user interface is depicted in Fig. 5.

As shown in Fig. 5, a graphical user interface 300 is presented to the participant upon accessing the course server system 16 where the participant may register for a plurality of courses and obtain other information provided about the courses available through the system 10. The graphical user interface 300 may comprise two major portions: a public portion 302 and an administrator level portion 304. According to one embodiment of the present invention, the public portion 302 is visible by every participant that accesses this information via the course server system 16. The administrator level portion 304, however, may be accessible only by an administrative level employee as determined based upon any one of a plurality of security measures known. For example, a cookie may be placed in each participant's computer and the cookie may determine whether the participant may access the administrator level portion 304 or not. Also, a specific IP address may be assigned to an administrative level employee having administrator level access and those employees assigned those specific

IP addresses are the only employees to whom this administrator level portion 304 of the graphical user interface 300 is displayed.

One embodiment of such an administrator level portion 304 is presented in Fig. 5 as well as in Figs. 14 through 17. Specifically, the administrator level portion 304 may comprise a plurality of selectable portions that initiate various functions by the course server system 16 and that are accessible by administrative level employees. These selectable portions may include the following: a new course button 306, an edit course button 308, an add site button 310, an edit site button 312, an add contact button 314, an edit contact button 316, an add location button 318, an edit location button 320, a schedule button 322, a students button 324, an administration button 326, a web main button 328, a headlines button 330, a survey button 332, a clean database button 334, and a log-out button 336.

According to one embodiment of the present invention, a course should be understood to be a set subject matter to provide a plurality of participants training on a topic. A class is a particular instance of a course that is scheduled to occur at a particular place and time. A site is a facility of the corporation (*e.g.*, Richmond, Norfolk, Atlanta, New York). A location may be a particular room or meeting place within that particular site. A contact may comprise a person responsible for the course including an instructor or an administrator. Accordingly, the various buttons 306 through 322 enable the adding or editing of existing courses, classes, sites, contacts, and locations. Public portion 302 comprises an introductory graphical user interface to enable each of the participants to navigate throughout the web site to access information about the courses being offered, retrieve his/her transcript, and to register for one or more courses online. As shown in the public portion 302, a plurality of links may be provided along a top of a screen such as "take me inside the company," "company communities," "community awareness," and "search the company" to enable the participant to access information about the corporation that he/she may desire. The rest of the public portion 302 may comprise a plurality of main navigational points to access the on-line course registration system 10. A "what's new" link 350 may be provided that, upon selection, presents a screen that determines a plurality of new courses that will be offered, any changes to existing courses, and other new information. An "about company university" portion 352 may also be provided that enables a new participant to understand the goals and purposes of

the corportion's training courses. Course information module 354 may also be provided as part of the graphical user interface 300 to enable the participant to proceed to one or more register for courses on-line. Additional details regarding this are described below. Also, a company facilitation network portion 356 may be provided that enables the participant to log in to the course server system 16 as an administrative level employee if the cookie or other security procedures have not been effectuated. Additional details of the administrator level portion 304 are provided below with respect to Figs. 14-17.

Accordingly, when the participant accesses the on-line registration system 10 and selects course information button 354, the course presentation module 54 is activated. The course presentation module 54 provides the functionality that accesses the course server system 16 databases 20 and 22 to present a listing of available courses for the participant. According to one embodiment, as described above, a graphical user interface 450, shown in Fig. 6A, may be initially presented and may provide basic information about how to utilize the course server system 16 and may present a variety of site locations from which the participant may desire to see a listing of available courses. One embodiment of such a graphical user interface 450 is depicted in Fig. 6A. As shown in Fig. 6A, a plurality of available site locations offering training courses are provided in section 452. Section 452 comprises a plurality of selectable links 454 that enables the participant to select the site location at which to access the listing of available courses. Some participants may desire to see the listing of available courses for all of the corporation's site locations and, therefore, an all locations link 455 may also be provided. Furthermore, according to another embodiment of the present invention, a plurality of on-line computer-based training courses may be provided by the corporation and, therefore, a listing of available computer-based training courses may be provided upon selection of computer-based training link 456.

The graphical user interface 450 may also comprise a plurality of different buttons that enable navigation throughout the site. For example, for a first-time participant, a new profile button 458 may be provided that, upon selection, takes the participant to the profile screen, such as the graphical user interface 952 shown in Fig. 13.

Additionally, another profile button 460 may be provided that, upon selection, takes the participant to a completed graphical user interface 952 of Fig. 13 to enable the participant to edit the various entries in the profile stored in the participant database 22.

Furthermore, as described in more detail below, a transcript and enrollment information is maintained about each participant in the participant database 22. Accordingly, as shown in Fig. 6A, a view, enrollment and transcript button 462 may be provided that, upon selection, presents a graphical user interface indicating the participant's current transcript and enrollment information. An example of this graphical user interface is depicted in a graphical user interface 900 of Fig. 12. Also, a one-click cancel class button 462 may be provided that enables the participant to quickly cancel a class for which the participant has registered. Additional links may also be provided to enable navigation throughout the site for the course server system 16, including an add to favorites link 464 that enables the participant to add this graphical user interface page 450 to a listing of favorites of a browser, a home link 466 which takes the participant back to the initial home page presented upon accessing the course server system 16, a links page 468 which displays a plurality of links that might be of use to the participant, and a feedback link 470 that enables the participant to input information to have electronically transmitted to an administrator of the web site for the course server system 16.

Upon selection of one of the course locations from the selectable links 454, or the all locations link 455, a course schedule graphical user interface 400 (shown in Fig. 6B) may be presented to the participant by the course presentation module 54. The graphical user interface 400 comprises a location information portion 402, a course schedule title 404, and a plurality of course entry rows 406 indicating a course, a duration, a plurality of dates, a plurality of times and registration information for each course listed in the course entry rows 406. Each of the course entry rows 406 may also comprise a selectable link portion 408 where, upon selection, information about the indicated course is provided to give the participant more information about a plurality of topics the indicated course covers, a plurality of requirements for the course, and other similar information. For example, an embodiment of a graphical user interface 500 providing more information about a "Microsoft networking essentials" course offered is depicted in Fig. 7. This graphical user interface screen 500 provides information about a plurality of objectives of the Microsoft course, a plurality of prerequisites, a target audience for the course and any costs associated with enrolling in the course. A close window button 502 is provided to enable the participant to close a window for the graphical user interface 500 and return to the previous graphical user interface screen. Within each selectable row 406 (of Fig. 6B)

for each course, registration information is provided. If a course is still available, a click to register on-line button 410 is provided that enables the participant to register for a course through the selection of one simple button.

Upon selection of the click to register on-line button 410, the course registration module 58 is activated by the course server system 16. The course registration module 58 may present a plurality of graphical user interfaces to the participant to ensure proper registration for a course. According to one embodiment of the present invention, a graphical user interface 600, such as that depicted in Fig. 8A, may be presented to the participant upon selection of a course for which to register. This graphical user interface screen 600 may query the participant to input a log-in ID under which the participant wants his/her course to be registered and may provide an input box 602 where information responsive to the query may be input. Additional buttons for functionality may also be provided, including a cancel button 604, a create new profile button 605, a back button 606, and a next button 608. The back and next buttons 606 and 608 may be provided to allow the participant to navigate through the registration process. The cancel button 604 may cancel the registration process for this particular course and the create new profile button 605 may take the participant to a profile creation system as described above. When the participant inputs the log-in ID via the input box 602 and presses the next button 608, another graphical user interface screen 700 may be presented, such as, for example, the graphical user interface screen 700 depicted in Fig. 9. The graphical user interface screen 700 presents input information about a course and a plurality of the details to verify that the participant has input the correct information before completing registration. The graphical user interface 700 also provides a cancel button 706, as well as a back button 704 and an enroll button 702. Upon selection of the enroll button 702, enrollment by the participant in the course is then effectuated.

At this point, the course registration module 58 determines the availability of the selected course and any prerequisites for the selected course as described above. If the participant has satisfied the prerequisites and the course is available, then the participant's profile is updated with the registration and enrollment information for the selected course, and the course database 20 is updated to include the name and identity of this particular participant on the roster for the selected course.

It is also possible within the present invention to provide a plurality of profiles for

a single participant. Accordingly, a profile verification screen 650, such as that shown in Fig. 8B, may be provided before proceeding from graphical user interface 600 to 700. This graphical user interface profile verification screen 650 provides intermediary information regarding the identity of the participant in the profile to verify that the correct profile for the participant has been found before proceeding. This graphical user interface profile verification screen 650 also provides a cancel button 654, a back button 652, and a next button 653, having functions similar to the cancel button 604, the back button 606 and the next button 608, described above with respect to Fig. 8A.

Upon selection of the enroll button 702 (shown in Fig. 9), confirmation by the course registration module 58, the determination that the participant has met the prerequisites for the selected course, and that the selected course is available, after the participant is enrolled in the selected course, a confirmation screen 800, such as the screen depicted in Fig. 10, may be presented to the participant. This confirmation screen 800 indicates that the participant has been successfully registered in the selected course and that an email confirmation notice may follow. A finish button 802 is provided to enable the participant to complete registration and return to an earlier screen to view additional courses in case the participant would like to register for additional courses at that time.

According to one embodiment of the present invention, an email confirmation notice may also be transmitted to the participant based on the information provided in the participant's profile. According to this embodiment, the information provided may include information about the registered course and may remind the participant to add the registered course to the participant's electronic calendar and information concerning where the participant may go to make changes to the registration. An example of such an email notification is provided in Fig. 11.

According to another embodiment of the present invention, the course registration information may be automatically updated to the participant's electronic calendar. According to this embodiment, the course registration module 58 activates the participant calendar update module 62 (of Fig. 3) and the course server system 16. The participant calendar update module 62 may perform the function of adding the registered course to the participant's electronic calendar. This function may be accomplished through a variety of different methodologies, all of which may be used according to the present

invention. For example, if the participant's electronic calendar is maintained or cooperating with the course server system 16, an entry may be added directly into the profile for the particular participant stored in the participant database 22 (shown in Fig. 2). Accordingly, when the participant pulls up his or her electronic calendar, the registered course will have been added to the electronic calendar automatically through a server where the electronic calendar is stored. Additionally, it is known that there are a plurality of electronic calendar programs commercially sold currently that can cooperate with email programs to enable the participant to schedule a meeting through the electronic calendar program. Accordingly, the course server system 16, through participant calendar update module 62, may actually transmit an email message such as the email message, depicted in Fig. 11, that offers the participant an opportunity to accept the registration for the course and wherein, if the offer is accepted, automatically adds the course to the participant's electronic calendar. When the participant calendar update module 62 creates an email message through the server, the participant calendar update module 62 serves the functions of both sending the email message as well as adds the registered course to the participant's electronic calendar. Other similar methodologies for automatically adding the registered course to the participant's electronic calendar may also be used.

As described above, the participant may select a course without knowing whether or not the selected course is available. The course server system 16 then checks the availability of the selected course and informs the participant whether or not the selected course is available. According to one embodiment of the present invention, if the selected course is not available, the course server system 16 may offer a waiting list for the selected course. In such an instance, a wait list module 68 (shown in Fig. 3) may be activated by the course registration module 58 to thereby create a waiting list associated with the selected course. The waiting list may comprise a priority scheme for determining which one of the participants on the waiting list will be added to the course if an opening becomes available. For example, if a participant who is registered for the course decides that he/she is not able to attend the course and cancels the course, an opening in the roster of participants for the course is created. At that point, the wait list module 68 may access a database having a listing of the participants on the waiting list for the course and determine which one of the participants should be added to the roster

of participants for the course. The course server system 16 may automatically add the participant to the roster, or may send an email or other message to the participant to offer the participant an opportunity to register for the course. For example, in between a time that a participant signs onto a waiting list for a course, and a second time that a course opening becomes available, the participant may have made and scheduled another appointment during the time the course is to take place. Therefore, by requesting information from the participant before removing the participant from the waiting list to be added to the course roster, the course server system 16 can save time by finding out the participant is no longer available. At that point, the wait list module 68 may proceed to determine the next available participant to register for the course.

In order to perform this functionality, wait list module 68 may cooperate with an alert module 60 provided by the course server system 16. The alert module 60 provides the functionality of transmitting one or more notices when a plurality of types of events occur. One instance for use of the alert module 60 is to notify a participant of an opening in the roster. However, it should be appreciated that the alert module 60 may provide the functionality to send information about a variety of inputs on the system. The following are just a few examples of the types of events for which the participant may desire to receive an alert. The participant may desire to receive an alert concerning when a particular course becomes available at a particular location and thereby sets that information in a profile. When the particular course is added for a particular time and location specified, an alert message may be sent to the participant to thereby notify the participant to access the site to register or to offer the participant an opportunity to automatically register for the course through the email system described above. Also, a participant may be provided an alert message each time a change is made to the course, such as a change in the time, a change in the location, a change in the subject matter covered, a change in the number of participants allowed, a change in an instructor, or other information about the course that may be pertinent to the participant to determine whether or not to continue the registration.

The details of enabling an administrator to make one or more changes to a course are provided below, and such changes may affect whether or not the participant would desire to continue the course. For example, the course may be determined to be a two hour course instead of a three hour course and the change may be reflected in the

schedule. When notified, the participant may decide that he/she needs three more hours of training to satisfy a requirement and therefore may desire to select a different course that satisfies the three hour requirement instead of a course of just two hours. An alert may also be transmitted when other participants register for the course. For example, one participant may like to take a course with a colleague participant from another site. Accordingly, the one participant could specify that an alert be transmitted to notify the one participant whenever the colleague participant registers for the course. Similarly, a supervisor may desire to be notified when any of the downline employees who the supervisor supervises registers for a course to therefore keep a running tab on each of the participants who have registered for each of the courses. Other alerts may also be possible through the present invention based on the data collected in the database to provide the most useful information available to various participants of the system.

The course server system 16 may also provide the course search module 66 (shown in Fig. 3) that enables the participant to search for a course based on a plurality of predetermined criteria, including one or more of the following: a location, a date, a time of day, a course title description, one or more key words within the course title description, an instructor, a number of hours, one or more prerequisites required, or any other information maintained about the course within the course database 20. Accordingly, the participant can access the site and search for the course based on one or more of these predetermined criteria rather than scrolling through what could be a very long list of courses available at each different site. For example, the participant may be interested to know what courses are available relating to Microsoft Word at the Richmond site location of the corporation in the month of May and, therefore, the participant may conduct a search based on the aforesaid criteria. A result page that includes a plurality of course listings such as, for example, the course listings depicted in the graphical user interface 400 of Fig. 6B may then be presented to enable the participant to select one or more of the courses included in the course listings and register for the selected course as described above. Furthermore, it may be desirable for a plurality of participants of the system 10, a plurality of supervisors of those participants, and/or a plurality of administrative level employees to review the transcript and enrollment history for particular participants. Accordingly, a transcript module 64 may be provided that enables a user, supervisor, or administrator (*e.g.*, based on certain privileges and password

protections) access to the enrollment and transcript information for a particular user.

Transcript module 64 (shown in Fig. 3) may present a graphical user interface 900 such as, for example, that shown in Fig. 12. This graphical user interface 900 may comprise a current enrollment portion 902 that shows a listing of each course for which the participant is currently registered. The graphical user interface 900 screen may also comprise a section (not shown) that displays the transcript of the participant and that comprises a listing of all of the courses completed by that participant within a predetermined period of time for the participant's entire period of employment by the corporation. Each entry in the current enrollment section 902 may comprise an action menu link 904 that enables the participant to take an action with respect to the course in that entry. For example, in the embodiment of Fig. 12, a cancel button 904 may be provided to enable the participant, a supervisor for the participant, or an administrative level employee to cancel that particular participant's registration for the course automatically through the selection of the one cancel button 904. Then, a confirmation screen may also be provided to confirm the action taken. A close window button 906 may also be provided to enable the participant to return to the previous screen.

Whereas each of the participants may be provided access only to his/her enrollment and transcript record based on the participant's name and password, a supervisor may be given access a plurality of records for a plurality of participants over whom the supervisor supervises to monitor the progress of the supervised participants and to verify that each of the supervised participants has actually completed one or more certain courses required for his/her job description. Furthermore, it may be desirable for a system administrative level employee to have access to all or at least a large set of the transcripts for the participants to enable the administrative level employee to cancel, modify, or register for one or more courses for each of the different participants such as for those of the participants who do not have direct access to the network 14 at a particular time. Thereby, the system administrative level employee may receive a telephone call instructing the administrative level employee that a participant desires to cancel a course, and may retrieve the participant's transcript and enrollment information from the participant database 22 and may then cancel the course registration for the participant while the participant is on the telephone with the administrative level employee.

These and other functions may be provided through an administration menu module 70 (shown in Fig. 3), such as that provided in course server system 16. According to one embodiment of the present invention, the administration menu module 70 enables an administrative level employee to access the course server system 16 and to monitor and modify contents of the profiles for each of the participants and the course description profiles to therefore maintain control over the entire registration process for these courses. According to one embodiment of the present invention, the administration menu module 70 may include the administrator level portion 304 within the graphical user interfaces of a plurality of pages within the site to enable administrative level employees to take certain actions with respect to the contents of courses and profiles for participants.

According to one embodiment of the present invention, to create a new course, the following data fields may require input by an administrative level employee and stored within the course database 20: a course title, a curriculum, a category, a classification, a default delivery method, a brief description, a plurality of objectives, an audience, a prerequisite information section, a plurality of prerequisite courses, a fee, and a default maximum course size. Similarly, to edit a course that preexists, a graphical user interface may be provided that presents a plurality of values for each of those fields for a course and enables the administrative level employee to change any of those existing values. According to one embodiment, to edit a course, the administrative level employee selects the edit course button 308 whereupon a graphical user interface 1000, such as that shown in Fig. 14, is presented to the administrative level employee. The graphical user interface 1000 may present a listing of courses to which that administrative level employee is authorized to make one or more edits. A different level of editing may be authorized for a plurality of different courses, or in one embodiment, the administrative level employee may be able to edit all of the courses.

The graphical user interface 1000, as shown in Fig. 14, may present a master listing of all courses currently offered by the corporation and administered by this particular course server system 16. Each course in the master course listing may comprise a name link 1002 (for a course 360 entitled "Feedback Workshop" in the example) and a delete button 1004. Upon selection of the name link 1002, the administrative level employee is able to edit information about the course. By selecting

the delete button 1004, the administrative level employee is able to delete the course from the listing of courses offered by the course server system 16. Upon selection of the name field 1002, another graphical user interface 1100 may be presented such as, for example, that shown in Fig. 15. The graphical user interface 1100 provides an administrator level portion 304 as well as a number of other fields about the course selected. A course title field 1102 provides a current title of the course and enables the administrative level employee to change the title of the course, if desired. A curriculum drop down menu 1104 may be provided that indicates whether or not the selected course is an independent course or one in a series of related courses. A category drop down menu 1106 may be provided to enable the administrative level employee to determine a category type for the selected course, whether the selected course is, for example, a computer-related course, a typing course, an organizational skills course, or concerns other subject matters offered through the company training program. Additionally, a classification drop down menu 1108 may be provided that enables input of whether the selected course is one of a personal nature, or one required for a particular job.

Additionally, a default delivery method selection portion 1110 may also be provided that enables the administrative level employee user to select the default delivery method for delivery of the selected course to the participants registered to take the selected course (*e.g.*, via a lecture, via on-line video/audio transmission, via a book, *etc.*). Further, a brief description section 1112 may be provided to enable the administrative level employee to create a brief description that is then used in describing the subject matter of the course to participants in the on-line registration system 10. A list of objectives may then be input in a section 1114 that provides an itemized list of a plurality of skills to be learned from the course.

An audience portion 1116 may also be provided that indicates a type of participant to whom the course is made available (*e.g.*, administrative level employees only, supervisor employees only, all employees, *etc.*). Prerequisite information for the selected course may be input in field 1118. For example, in this field 1118, it may be desirable to indicate that a prerequisite for the selected course is that a participant have a working understanding of calculus. Next, one or more prerequisite courses are selected from a list of all current courses in section 1120. A fee associated with the selected course may be input in a section 1122 and the default maximum class size may be selected in 1124. A

default maximum class size field 1124 specifies the number of participants that may attend the selected course to enable the course to continue to provide a meaningful learning experience for each of the participants. Depending upon the location for the course, a class size may be smaller for each class of a course, but that may be input upon creating a class based on that course. Once the listing of courses have been created or edited by the administrative level employee, a plurality of classes based on each of the courses may be scheduled to be held throughout the various locations and sites of the corporation.

To add a new course, a graphical user interface 1200, shown in Fig. 16, may be presented to the administrative level employee and may request the following information: a course, a plurality of locations, a date, a duration, a size of the course, an instructor and similar other information. Additionally, to edit an existing course, the graphical user interface 1200 may be presented to the administrative level employee. A master scheduled course listing may be provided to enable the administrative level employee to select which course to edit. Alternatively, the administrative level employee may specify a plurality of courses in a section 1202. Also the administrative level employee may list the courses by specific locations through a location selection portion 1204. In any event, each entry for a course indicates the course name with the selectable link, the date with the selectable link and various actions that may be taken including listing a roster of participants for the course thorough a portion 1208 or to delete the course through the delete button 1210. To edit a particular course, the administrative level employee selects the linked portion 1206 whereupon information input for that selected course is presented and may be changed or modified.

Further, upon selection of the roster portion 1208, a course roster graphical user interface 1300, such as, for example, that shown in Fig. 17, may be presented. This course roster provides a list of all of the participants who are currently registered for a course, a location where each of the participants works, a date on which each of the participants added the course, any date of update, a current enrollment status for each of the participants and a menu of a plurality of actions that the administrative level employee may take with respect to each participant including a wait section 1314, a cancel section 1316, a completed the course section 1318, an incomplete course section 1320 or an enroll in section 1322. Additionally, a course status portion 1310 may be presented that

indicates the availability for additional participants to enroll in the particular course. Additional functionality may be provided including an ability to add a participant through selection of a link 1302, edit the course through selection of a link 1304, send an email message about the course to the participants through selection of a link 1306, or change an order in which the participants are listed through selection of a link 1308. For example, for very large courses, it may be desirable to list the participants by a location rather than by a last name of each participant and that may be accomplished through a change sort functionality of the link 1308.

Additional functionality may be provided for the administrative level employee including an ability to view a master course schedule. Also, the administrative level employee may desire to view a complete listing of all participants who have ever created a profile to take a course through the system 10 by selecting the students button 324. Moreover, it may be desirable for the administrative level employee to return to an administration home-page of the site through selection of the administration button 326, or to view a main web-page that a participant might see through the selection of the web-main button 328. As described above, a *"What's New Section"* may be presented to the participant within the site that provides a listing of changes and other information of use to the participant. In order for the administrative level employee to change the information in the *"What's New Section"*, a graphical user interface may be presented upon selection of the headlines button 330. The administrative level employee may also desire to create an online survey for the participants who access the site and may be able to do so through selection of the survey button 332. By doing so, the administrative level employee can create a plurality of questions that are a part of a survey and can create a plurality of buttons within the graphical user interface where, upon selection, a participant responds to the survey questions. A clean DB functionality button 334 may also be provided that cleans out one or more partially completed records from the database system 18. For example, as described above, in order to create a course, a two step process is conducted. First, the administrative level employee selects a course, an instructor and a location at which the new course will be offered. The administrative level employee then selects submit and then is offered an opportunity to select a time and a date for the new course. If the administrative level employee fails to do so, any partially completed records that are stored in the database system 18 may then be cleaned

through the clean DB functionality button 334 to thereby free up space in the database system 18. Also, a profile for a participant who has not signed on to a course or who is no longer employed by the corporation may be flagged so that when the clean DB function is operating, those profiles are deleted from the database system 18 as well. There are other similar uses of the clean DB functionality button 334 as would be known to a person of ordinary skill. A log out button 336 may also be provided to enable the administrative level employee to log out of the administration functions provided by the course server system 16.

As described above, it may desirable for each participant to create a profile containing a plurality of courses in which the participant may be interested and allow the course server system 16 to notify the participant when a course becomes available. According to this embodiment, a process 200 is provided as depicted in Fig. 4. After a participant registers for a course and creates a profile in step 202, the created profile includes a list of courses for which the participant may have an interest, including a listing of such courses by a category, a subject matter, a key word, an instructor, a location, *etc.* Any time a participant deletes a course or makes a change in a course in step 204, the course server system 16 then compares the course deletion or change to a profile for each of the other participants on the course server system 16 in step 206. If the deleted or changed course is found in a profile for one of the other participants in step 208, then an alert is sent to the one other participant offering the course in step 210. If there is no match of a deleted or changed course with a profile for any other participant, then the process 200 back tracks to step 204 and waits for additional courses to be added or changed by one or more participants.

Although a detailed description of the preferred embodiments has been provided, the scope of the invention is not limited thereby. Various changes and modifications within the scope of the invention will be readily apparent to those skilled in the art as defined by the appended claims.

WHAT IS CLAIMED IS:

1. A server system accessible over one or more networks by a plurality of participants to enable each of the participants to register for one or more courses in a company training program, the server system connected to a database that stores course data and participant data, the participant data including a participant profile and a participant transcript, the server system comprising:

a course presentation module that presents a graphical user interface to a participant to enable the participant to view a listing of available courses offered in the company training program by a location, the course presentation module accessing the course data in the database to generate contents of a graphical user interface page upon selection of a location by the participant;

a course registration module that presents a second graphical user interface to the participant that enables the participant to select and register for a course for which the participant desires to be registered from the listing of available courses in the course presentation module;

a participant transcript module that updates the participant transcript for the participant upon completion of the registered course by the participant; and

an administration access module that enables a plurality of administration level employees to monitor the participant transcripts.

2. The system of claim 1 wherein each course has a limit on a number of participants for a roster and the course registration module determines whether the limit for a desired course has been reached prior to registering the participant for the desired course.

3. The system of claim 2 wherein the course registration module enables the participant to be added to a waiting list for the desired course if the limit for the roster for the desired course has been reached.

4. The system of claim 3 further comprising a wait list module that maintains the waiting list for each of the courses offered in the company training program.

5. The system of claim 4 wherein the wait list module receives information regarding an opening on the roster for the desired course, identifies a participant on the waiting list to fill the opening, notifies the identified participant electronically of the opening, and offers the identified participant the opening on the roster for the desired

course.

6. The system of claim 1 further comprising a calendar update module that adds the course to a calendar electronically maintained by the participant upon registration for the course by the participant.

7. The system of claim 1 wherein the course registration module cooperates with a calendar program operated by the participant to verify that a time and a date for the course are available according to a calendar of the participant prior to enabling the participant to register for the desired course.

8. The system of claim 7 wherein the desired course has one or more prerequisites and wherein the course registration module queries the participant transcript module to determine whether the participant has satisfied the one or more prerequisites for the desired course prior to enabling the participant to register for the desired course.

9. The system of claim 1 further comprising a course search module that enables the participant to search for one or more courses meeting one or more criteria specified by the participant and to retrieve from the database the one or more courses meeting the one or more criteria specified by the participant, and to pass those retrieved courses to the course presentation module to present in a graphical user interface to the participant.

10. The system of claim 1 further comprising an administration access module that enables an administrative level employee to administer the company training program online.

11. The system of claim 10 wherein the administration access module enables the administrative level employee to view a roster of participants for a scheduled course.

12. The system of claim 10 wherein the administration access module enables the administrative level employee to create a course.

13. The system of claim 10 wherein the administration access module enables the administrative level employee to edit a course.

14. The system of claim 13 further comprising an alert module that notifies one or more participants that have registered for a course of a change in the registered course.

15. The system of claim 10 wherein the administration access module enables the administrative level employee to add a course to the listing of available courses.

16. The system of claim 10 wherein the administration access module enables the administrative level employee to view a transcript for each of the participants online.

17. The system of claim 10 wherein the administration access module enables the administrative level employee to add a participant to a roster for a course.

18. The system of claim 10 wherein the administration access module enables the administrative level employee to update a participant's registration for a course to indicate a completion of the registered course and wherein the update triggers the transcript module to update the participant's transcript.

19. A system for enabling a plurality of participants to register for one or more courses in a company training program comprising:

a plurality of participant systems connected over one or more networks to a server system wherein the server system is connected to a database that stores course data and participant data, the participant data including a participant profile and a participant transcript;

the server system including:

a course presentation module that presents a graphical user interface to a participant to enable the participant to view a listing of available courses offered in the company training program by a location, the course presentation module accessing the course data in the database to generate the contents of a graphical user interface page upon selection of the location by the participant;

a course registration module that presents a second graphical user interface to the participant that enables the participant to select and register for a course for which the participant desires to be registered from the listing of available courses in the course presentation module;

a participant transcript module that updates the participant transcript for the participant upon completion by the participant of the registered course; and

an administration access module that enables a plurality of administrative level employees to monitor the participant transcripts.

20. The system of claim 19 wherein each course has a limit on a number of participants for a roster and the course registration module determines whether the limit for a desired course has been reached prior to registering the participant for the desired course.

21. The system of claim 20 wherein the course registration module enables the participant to be added to a waiting list for the desired course if the limit for the roster for the desired course has been reached.

22. The system of claim 21 further comprising a wait list module that maintains the waiting list for each of the courses offered in the company training program.

23. The system of claim 22 wherein the wait list module receives information regarding an opening on the roster for the desired course, identifies a participant on the waiting list to fill the opening, notifies the identified participant electronically of the opening and offers the identified participant the opening on the roster for the desired course.

24. The system of claim 19 further comprising a calendar update module that adds the course to a calendar electronically maintained by the participant upon registration for the course by the participant.

25. The system of claim 19 wherein the course registration module cooperates with a calendar program operated by the participant to verify that a time and a date for the course are available according to a calendar of the participant prior to enabling the participant to register for the desired course.

26. The system of claim 25 wherein the desired course has one or more prerequisites and wherein the course registration module queries the participant transcript module to determine whether the participant has satisfied the one or more prerequisites for the desired course prior to enabling the participant to register for the desired course.

27. The system of claim 19 further comprising a course search module that enables the participant to search for one or more courses meeting one or more criteria specified by the participant and to retrieve from the database the one ore more courses meeting the one or more criteria specified by the participant, and to pass those retrieved courses to the course presentation module to present in a graphical user interface to the participant.

28. The system of claim 19 further comprising an administration access module that enables an administrative level employee to administer the company training program online.

29. The system of claim 28 wherein the administration access module enables

the administrative level employee to view a roster of participants for a scheduled course.

30. The system of claim 28 wherein the administration access module enables the administrative level employee to create a course.

31. The system of claim 28 wherein the administration access module enables the administration level employee to edit a course.

32. The system of claim 28 further comprising an alert module that notifies one or more participants that have registered for a course of a change in the registered course.

33. The system of claim 28 wherein the administration access module enables the administrative level employee to add a course to the listing of available courses.

34. The system of claim 28 wherein the administration access module enables the administrative level employee to view a transcript for each of the participants online.

35. The system of claim 28 wherein the administration access module enables the administrative level employee to add a participant to a roster for a course.

36. The system of claim 28 wherein the administration access module enables the administrative level employee to update a participant's registration for a course to indicate a completion of the registered course and wherein the update triggers the transcript module to update the participant's transcript.

37. A process of enabling a plurality of participants to register for one or more courses in a company training program by connecting to a server system over a network and wherein the server system maintains a database that stores course data and participant data, the participant data including a participant profile and a participant transcript, the process comprising the steps of:

presenting a graphical user interface to a participant to enable the participant to view a listing of available classes offered in the company training program by a location, the contents of the graphical user interface being generated by accessing the course data in the database upon selection of the location by the participant;

presenting a second graphical user interface to the participant that enables the participant to select a course for which the participant desires to be registered;

updating the participant transcript for the participant upon completion by the participant of the registered course; and

enabling a plurality of administrative level employees to monitor the participant

transcripts.

38. The process of claim 37 wherein each course has a limit on a number of participants for a roster and wherein the process further comprises the step of determining whether the limit for a desired course has been reached prior to registering the participant for the desired course.

39. The process of claim 38 further comprising the step of enabling the participant to be added to a waiting list for the desired course if the limit for the roster for the desired course has been reached.

40. The process of claim 39 further comprising the step of maintaining a waiting list for each of the courses offered in the company training program.

41. The process of claim 40 further comprising the steps of:

receiving information regarding an opening on the roster for the desired course;

identifying a participant on the waiting list to fill the opening;

notifying the identified participant electronically of the opening; and

offering the identified participant the opening on the roster for the desired course.

42. The process of claim 37 further comprising the step of adding the registered course to a calendar electronically maintained by the participant upon registration for the desired course by the participant.

43. The process of claim 37 further comprising the step of verifying availability of the participant in the participant's electronic calendar prior to enabling the participant to register for the desired course.

44. The process of claim 37 wherein the desired course has one or more prerequisites and wherein the process further comprises the step of determining whether the participant has satisfied the one or more prerequisites for the desired course prior to enabling the participant to register for the desired course.

45. The process of claim 37 further comprising the step of enabling an administrative level employee to administer the company training program online.

46. The process of claim 37 further comprising the step of enabling an administrative level employee to view a roster of participants for a scheduled course.

47. The process of claim 37 further comprising the step of enabling an administrative level employee to create a course.

48. The process of claim 37 further comprising the step of enabling an

administrative level employee to edit a course.

49. The process of claim 48 further comprising the step of alerting each of the participants that have registered for a course of a change in the registered course.

50. The process of claim 37 further comprising the step of enabling an administrative level employee to add a course.

51. The process of claim 37 further comprising the step of enabling an administrative level employee to view a transcript for each of the participants online.

52. The process of claim 37 further comprising the step of enabling an administrative level employee to add a participant to a roster for a course.

53. The process of claim 37 further comprising the step of enabling an administrative level employee to update a participant's registration for a course to indicate a completion of the registered course and wherein the update triggers an update of the participant's transcript.

54. A server system accessible over one or more networks by a plurality of participants to enable the participants to register for one or more courses in a company training program, the server system connected to a database that stores course data and participant data, the participant data including a participant profile and a participant transcript, the server system comprising:

a course presentation module that presents a graphical user interface to a participant to enable the participant to view a listing of available courses offered in the company training program by a location, the course presentation module accessing the course data in the database to generate contents of a graphical user interface page upon selection of the location by the participant;

a course registration module that presents a second graphical user interface to the participant that enables the participant to select and register for a course for which the participant desires to be registered from the listing of available courses in the course presentation module;

a participant transcript module that updates the participant transcript for the participant upon completion by the participant of the registered course; and

a calendar update module that adds the course to a calendar electronically maintained by the participant upon registration for the course by the participant.

55. The system of claim 54 wherein each course has a limit on a number of

participants for a roster and the course registration module determines whether the limit for a desired course has been reached prior to registering the participant for the desired course.

56. The system of claim 55 wherein the course registration module enables the participant to be added to a waiting list for the desired course if the limit for the roster for the desired course has been reached.

57. The system of claim 56 further comprising a wait list module that maintains the waiting list for each of the courses offered in the company training program.

58. The system of claim 57 wherein the wait list module receives information regarding an opening on the roster for the desired course, identifies a participant on the waiting list to fill the opening, notifies the identified participant electronically of the opening and offers the identified participant the opening on the roster for the desired course.

59. The system of claim 54 wherein the course registration module cooperates with a calendar program operated by the participant to verify that a time and a date for the course are available according to a calendar of the participant prior to enabling the participant to register for the desired course.

60. The system of claim 54 wherein the desired course has one or more prerequisites and wherein the course registration module queries the participant transcript module to determine whether the participant has satisfied the one or more prerequisites for the desired course prior to enabling the participant to register for the desired course.

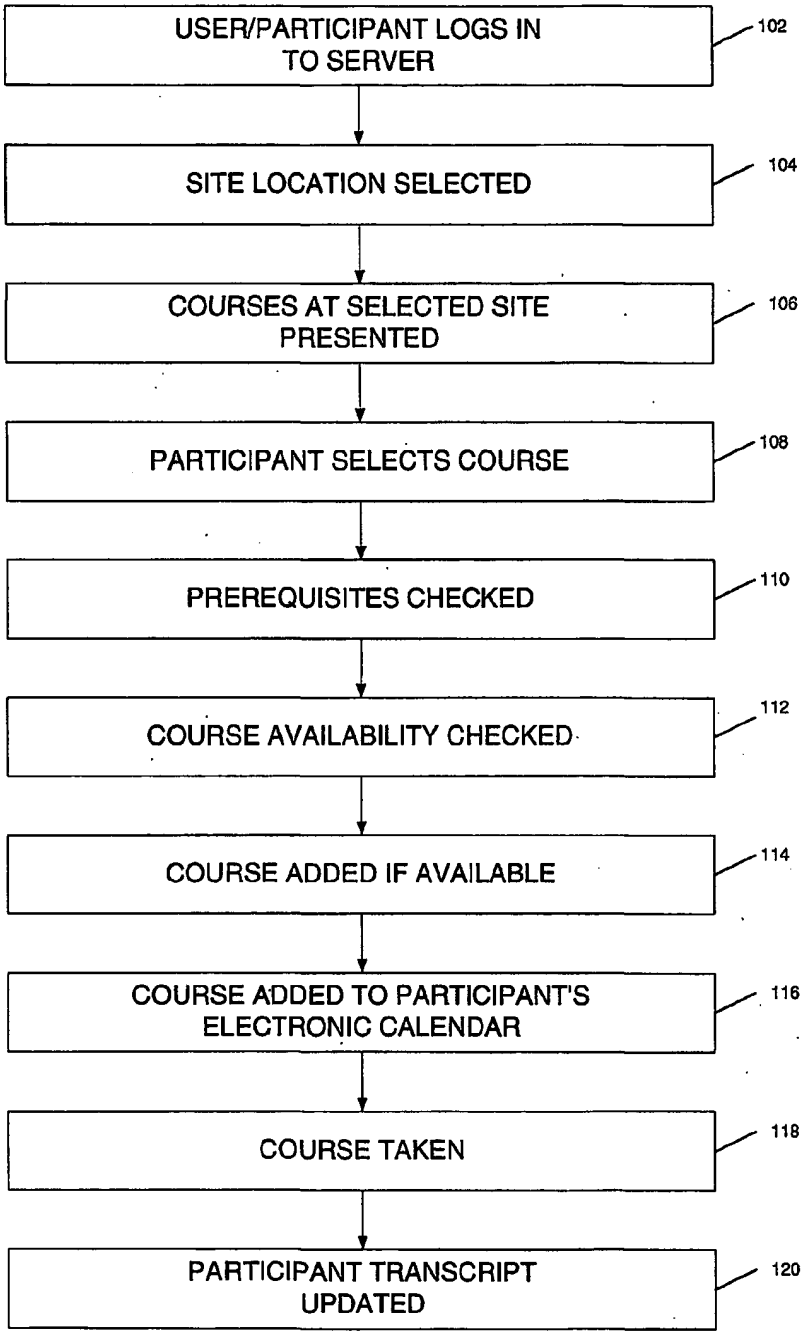

USER/PARTICIPANT LOGS IN TO SERVER
102
SITE LOCATION SELECTED
104
COURSES AT SELECTED SITE PRESENTED
106
PARTICIPANT SELECTS COURSE
108
100
PREREQUISITES CHECKED
110
COURSE AVAILABILITY CHECKED
112
COURSE ADDED IF AVAILABLE
114
COURSE ADDED TO PARTICIPANT'S ELECTRONIC CALENDAR
116
COURSE TAKEN
118
PARTICIPANT TRANSCRIPT UPDATED
120

FIGURE 1

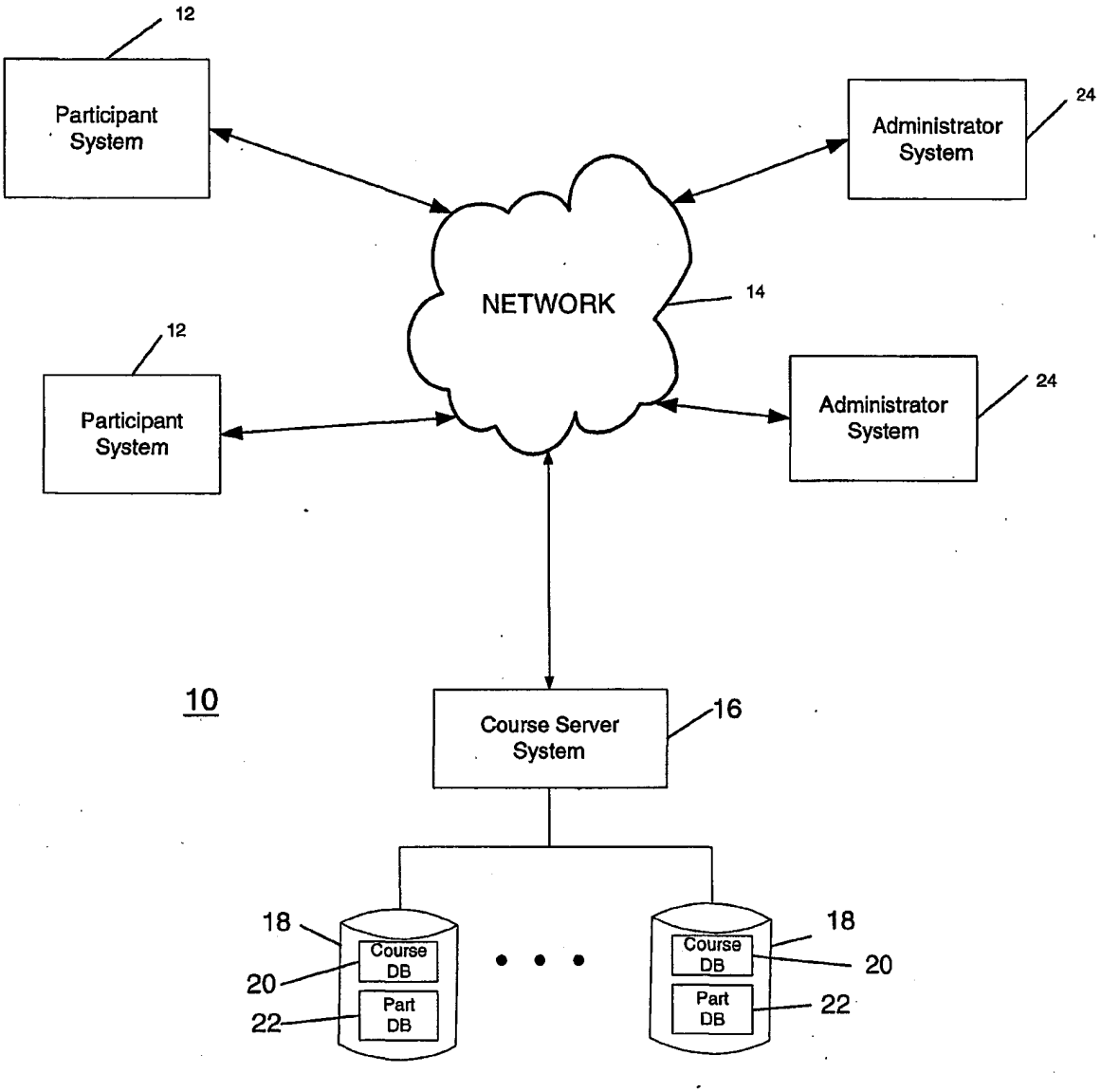

12
Participant System
24
Administrator System
NETWORK
14
12
Participant System
24
Administrator System
10
Course Server System
16
18
Course DB
20
Part DB
22
18
Course DB
20
Part DB
22

FIGURE 2

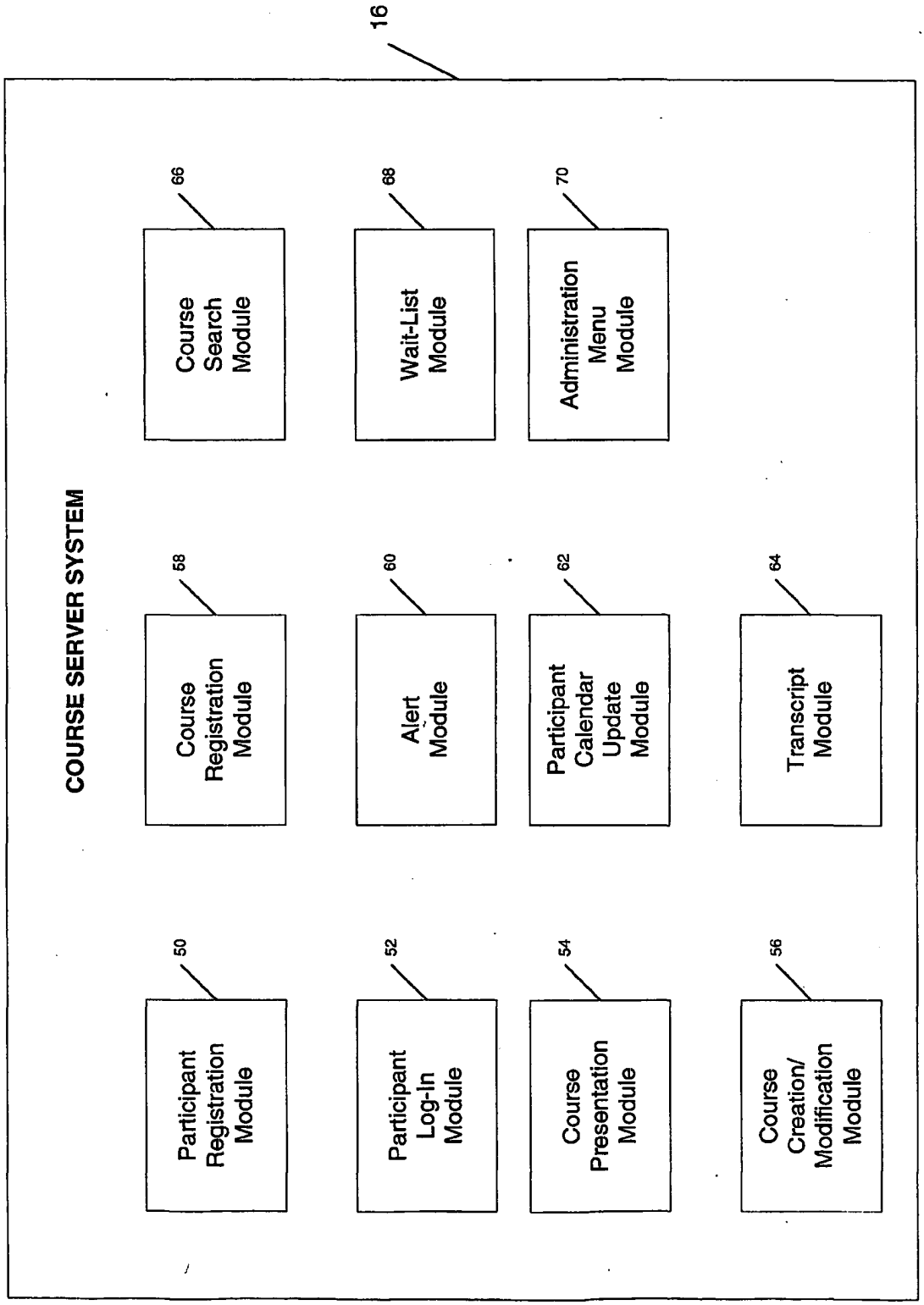

16
COURSE SERVER SYSTEM
Participant Registration Module
50
Participant Log-In Module
52
Course Presentation Module
54
Course Creation/ Modification Module
56
Course Registration Module
58
Alert Module
60
Participant Calendar Update Module
62
Transcript Module
64
Course Search Module
66
Wait-List Module
68
Administration Menu Module
70

FIGURE 3

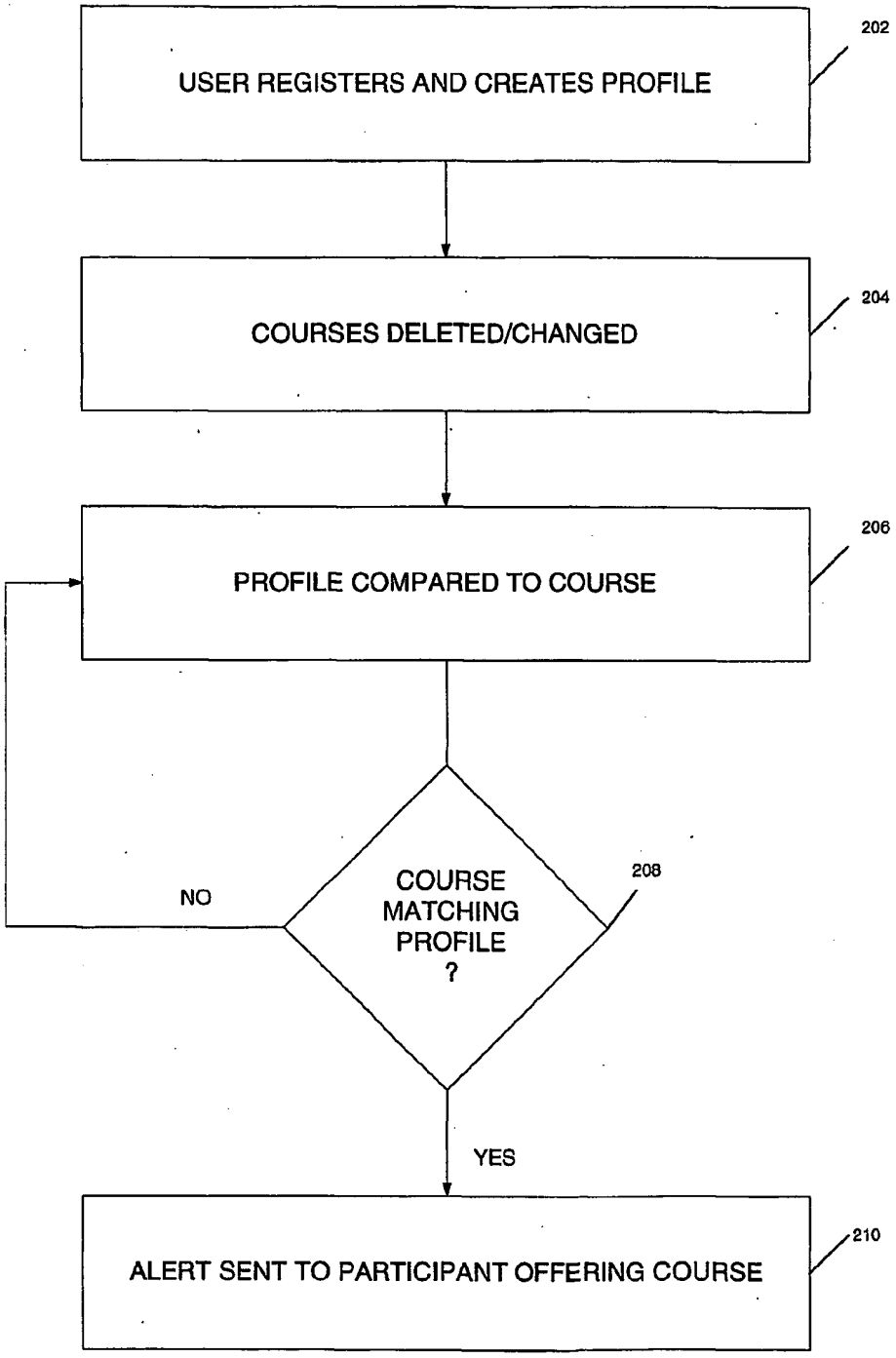

USER REGISTERS AND CREATES PROFILE
202
COURSES DELETED/CHANGED
204
200
PROFILE COMPARED TO COURSE
206
COURSE MATCHING PROFILE ?
208
NO
YES
ALERT SENT TO PARTICIPANT OFFERING COURSE
210

FIGURE 4

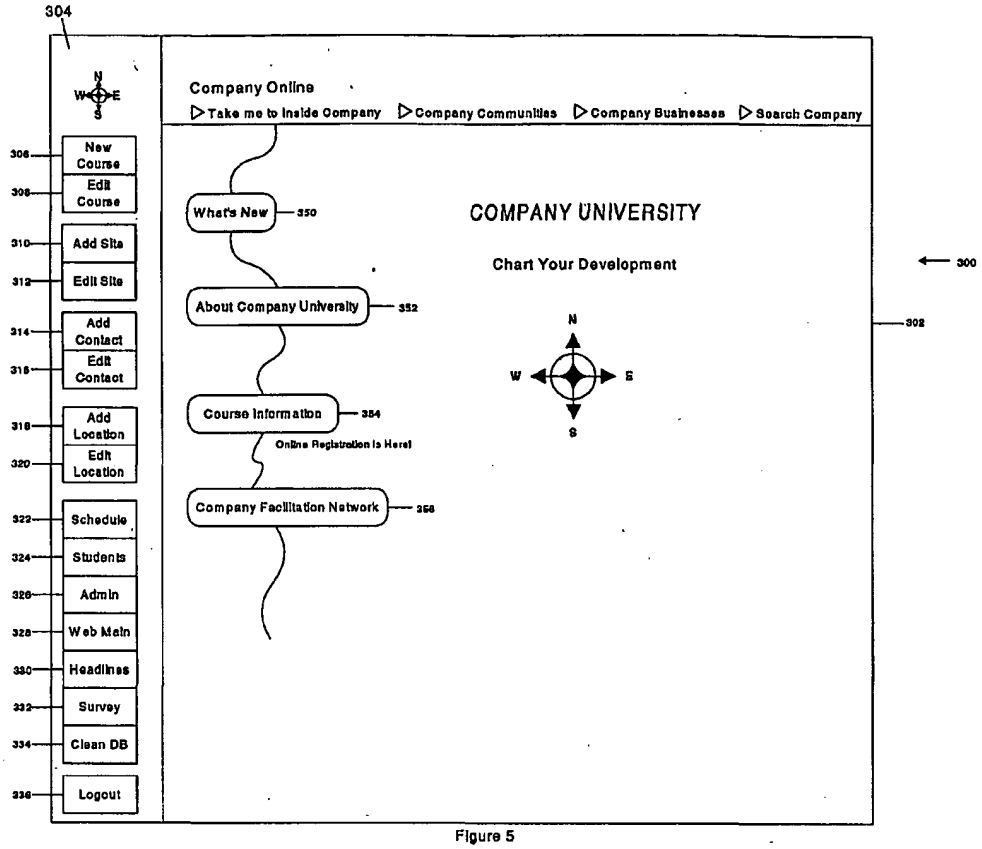

304
N
W
E
S
306
New Course
308
Edit Course
310
Add Site
312
Edit Site
314
Add Contact
316
Edit Contact
318
Add Location
320
Edit Location
322
Schedule
324
Students
326
Admin
328
Web Main
330
Headlines
332
Survey
334
Clean DB
336
Logout
Company Online
Take me to Inside Company
Company Communities
Company Businesses
Search Company
What's New
350
About Company University
352
Course Information
354
Online Registration is Here!
Company Facilitation Network
356
COMPANY UNIVERSITY
Chart Your Development
N
W
E
S
300
302

Figure 5

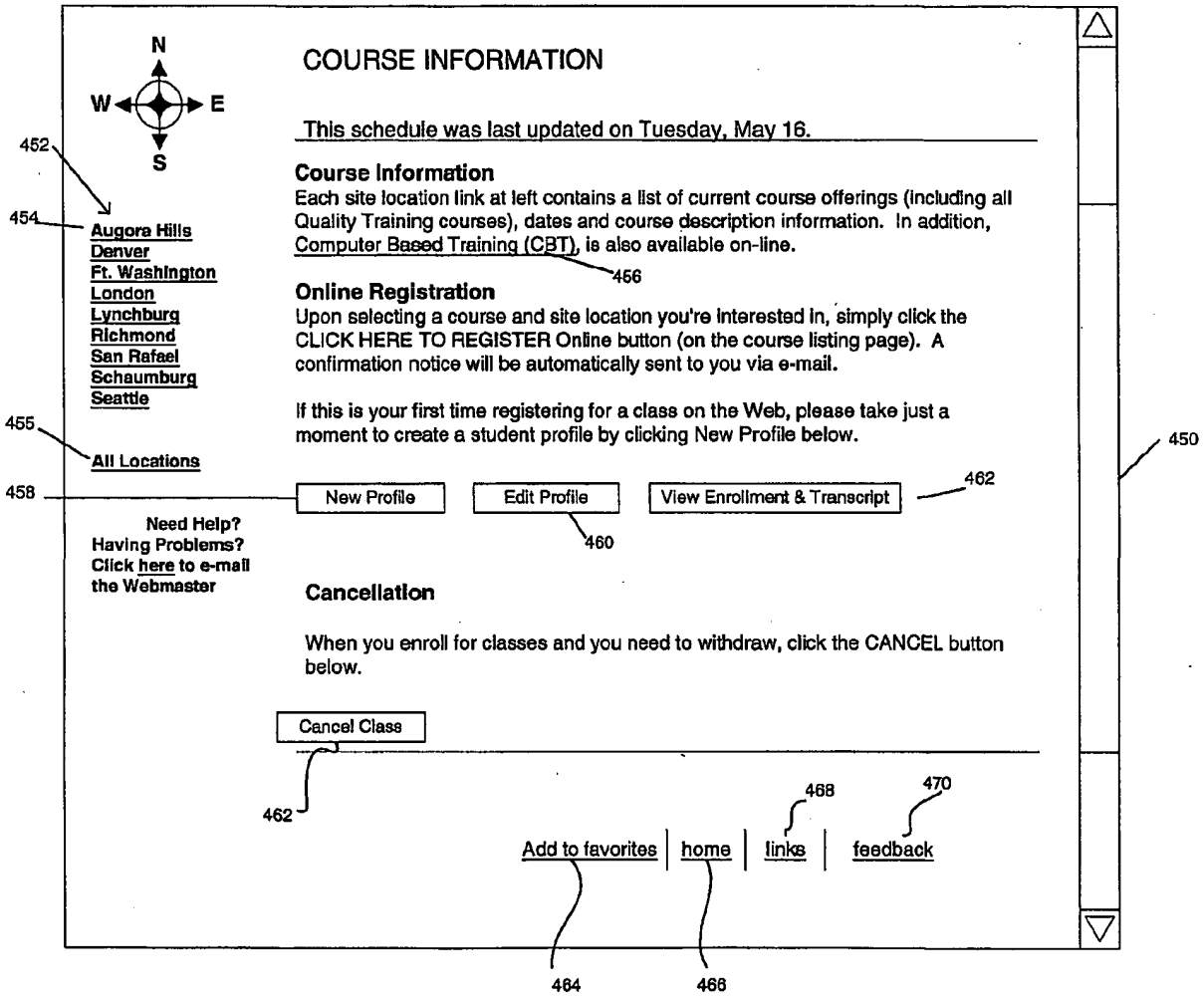

N
W
E
S
COURSE INFORMATION
This schedule was last updated on Tuesday, May 16.
Course Information
Each site location link at left contains a list of current course offerings (including all Quality Training courses), dates and course description information. In addition, Computer Based Training (CBT), is also available on-line.
Online Registration
Upon selecting a course and site location you're interested in, simply click the CLICK HERE TO REGISTER Online button (on the course listing page). A confirmation notice will be automatically sent to you via e-mail.
If this is your first time registering for a class on the Web, please take just a moment to create a student profile by clicking New Profile below.
Augora Hills
Denver
Ft. Washington
London
Lynchburg
Richmond
San Rafael
Schaumburg
Seattle
All Locations
Need Help?
Having Problems?
Click here to e-mail the Webmaster
New Profile
Edit Profile
View Enrollment & Transcript
Cancellation
When you enroll for classes and you need to withdraw, click the CANCEL button below.
Cancel Class
Add to favorites
home
links
feedback
452
454
455
458
456
460
462
464
466
468
470
450

FIGURE 6A

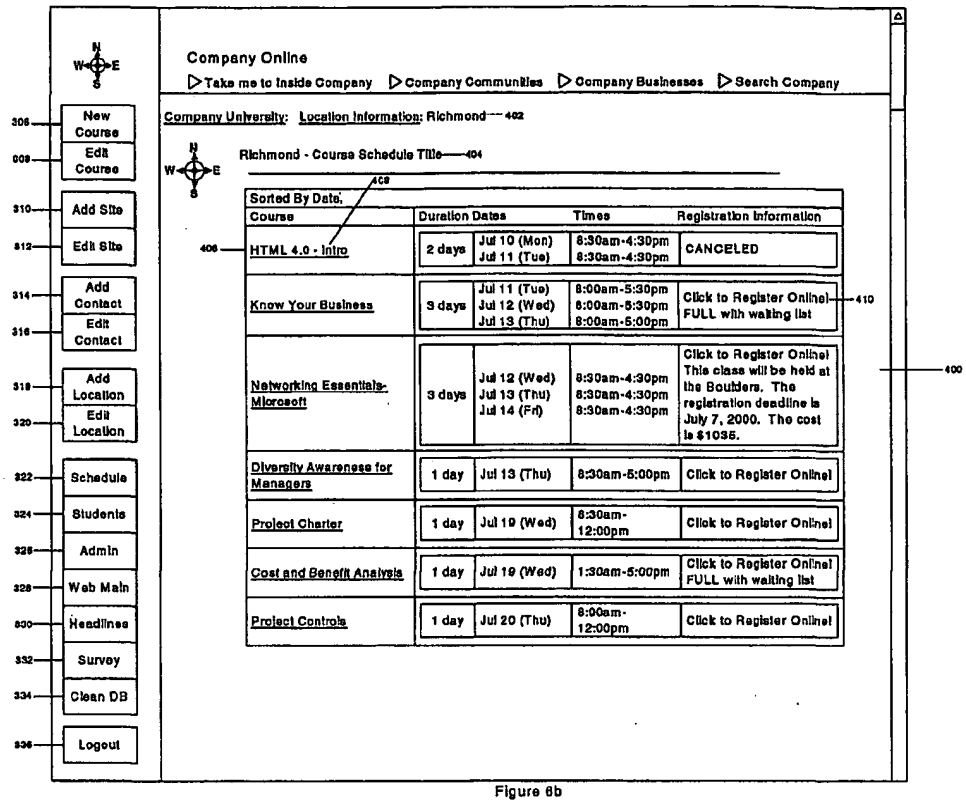

Company Online
Take me to Inside Company
Company Communities
Company Businesses
Search Company
New Course
Edit Course
Add Site
Edit Site
Add Contact
Edit Contact
Add Location
Edit Location
Schedule
Students
Admin
Web Main
Headlines
Survey
Clean DB
Logout
Company University: Location Information: Richmond
Richmond - Course Schedule Title
Sorted By Date
Course
Duration
Dates
Times
Registration Information
HTML 4.0 - Intro
2 days
Jul 10 (Mon)
Jul 11 (Tue)
8:30am-4:30pm
8:30am-4:30pm
CANCELED
Know Your Business
3 days
Jul 11 (Tue)
Jul 12 (Wed)
Jul 13 (Thu)
8:00am-5:30pm
8:00am-5:30pm
8:00am-5:00pm
Click to Register Online!
FULL with waiting list
Networking Essentials-Microsoft
3 days
Jul 12 (Wed)
Jul 13 (Thu)
Jul 14 (Fri)
8:30am-4:30pm
8:30am-4:30pm
8:30am-4:30pm
Click to Register Online!
This class will be held at the Boulders. The registration deadline is July 7, 2000. The cost is $1035.
Diversity Awareness for Managers
1 day
Jul 13 (Thu)
8:30am-5:00pm
Click to Register Online!
Project Charter
1 day
Jul 19 (Wed)
8:30am-12:00pm
Click to Register Online!
Cost and Benefit Analysis
1 day
Jul 19 (Wed)
1:30am-5:00pm
Click to Register Online!
FULL with waiting list
Project Controls
1 day
Jul 20 (Thu)
8:00am-12:00pm
Click to Register Online!

Figure 6b

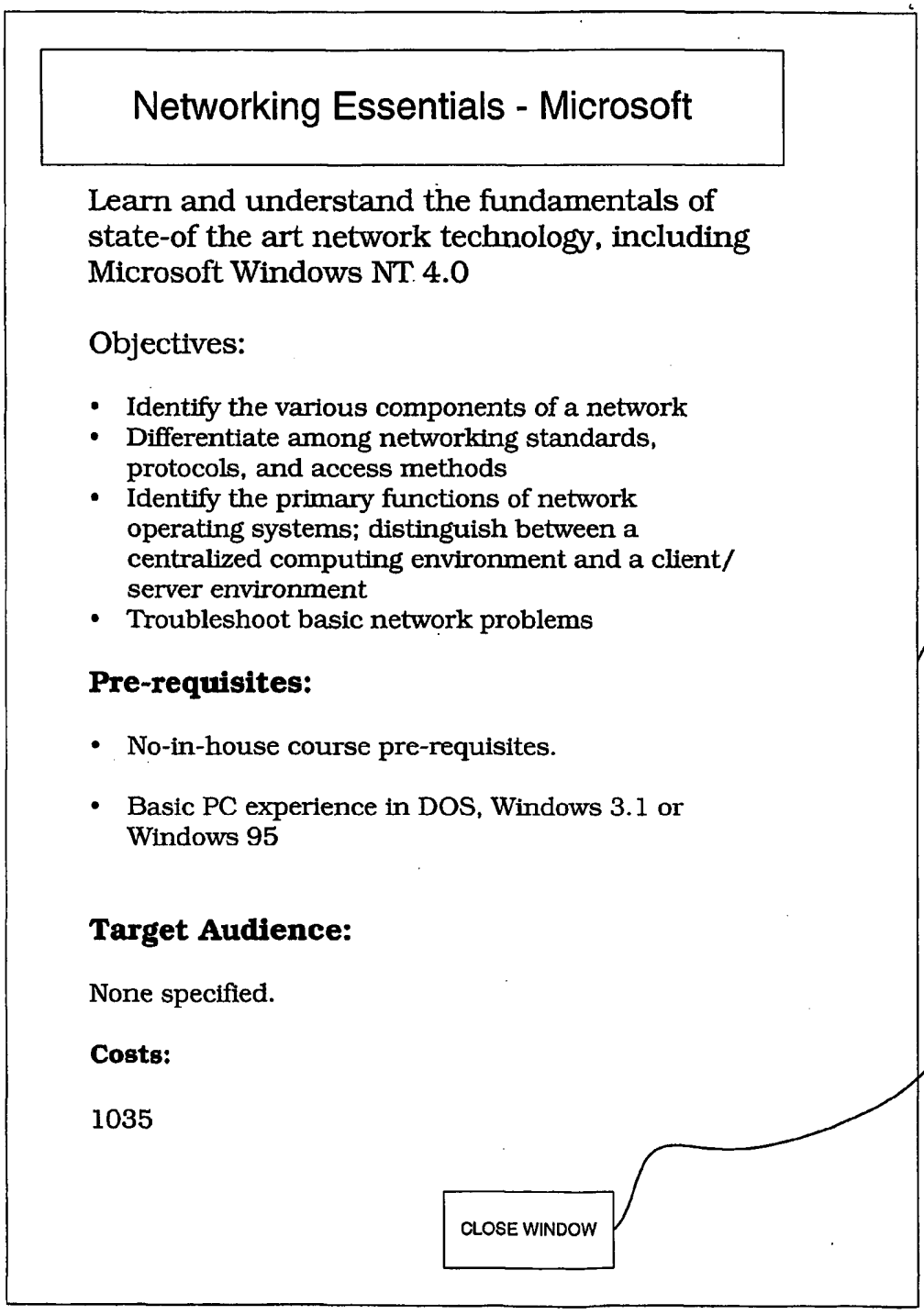

Networking Essentials - Microsoft
Learn and understand the fundamentals of state-of the art network technology, including Microsoft Windows NT 4.0
Objectives:
• Identify the various components of a network
• Differentiate among networking standards, protocols, and access methods
• Identify the primary functions of network operating systems; distinguish between a centralized computing environment and a client/ server environment
• Troubleshoot basic network problems
Pre-requisites:
• No-in-house course pre-requisites.
• Basic PC experience in DOS, Windows 3.1 or Windows 95
Target Audience:
None specified.
Costs:
1035
CLOSE WINDOW
500
502

FIGURE 7

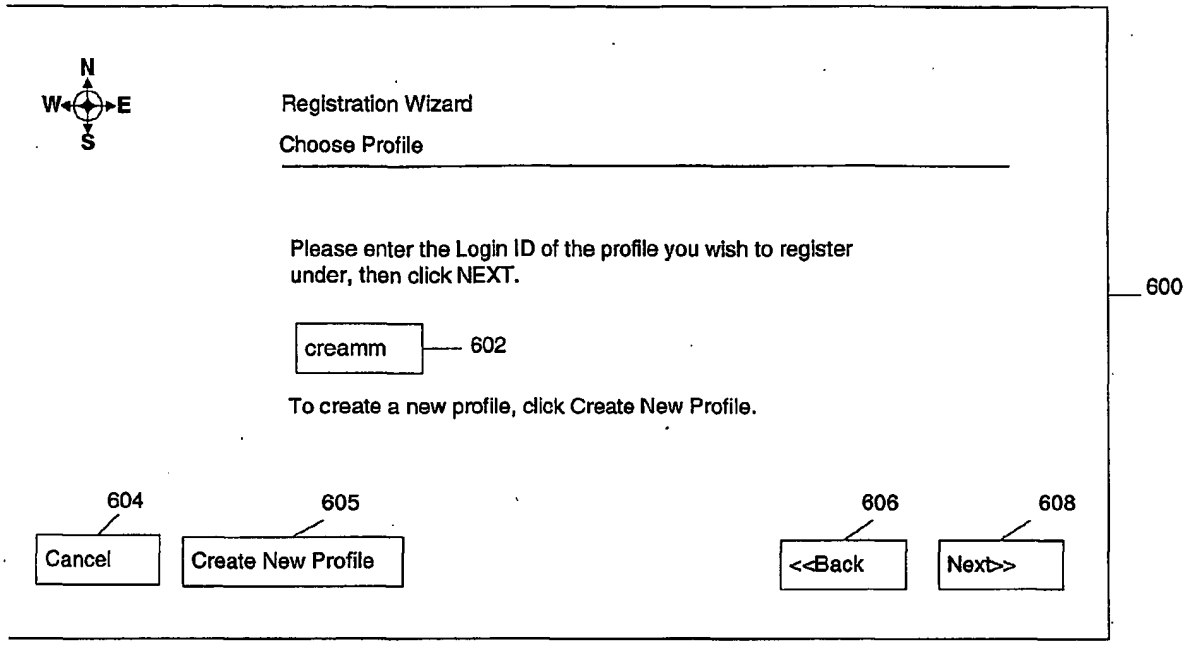


Figure 8a

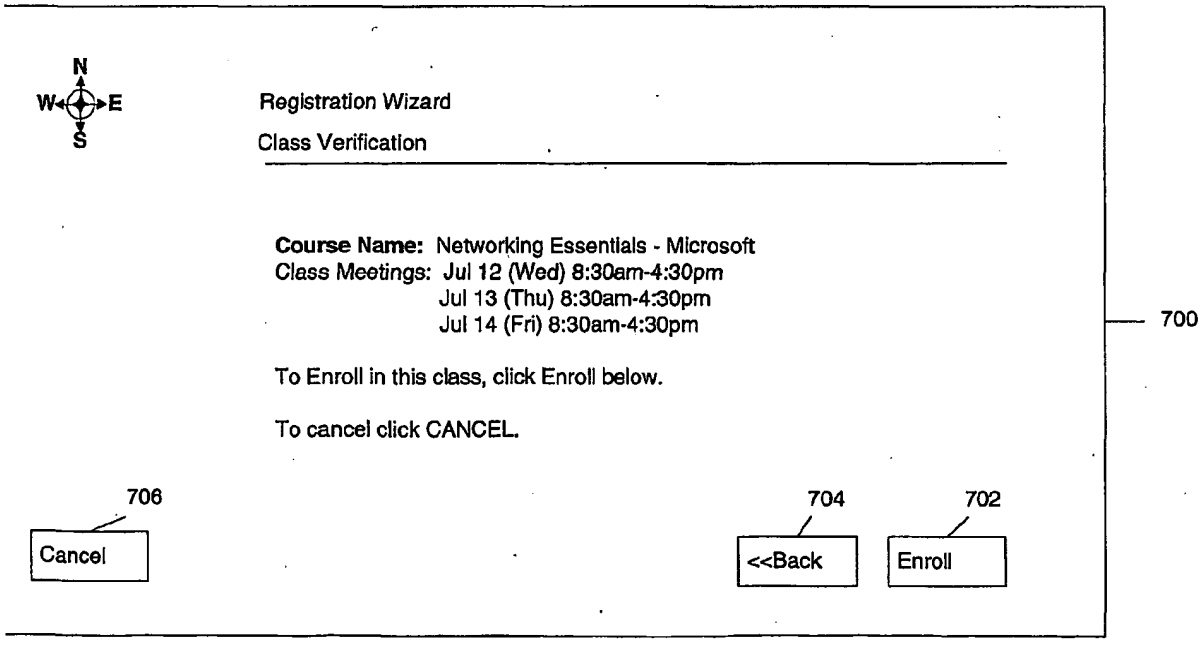


Figure 9

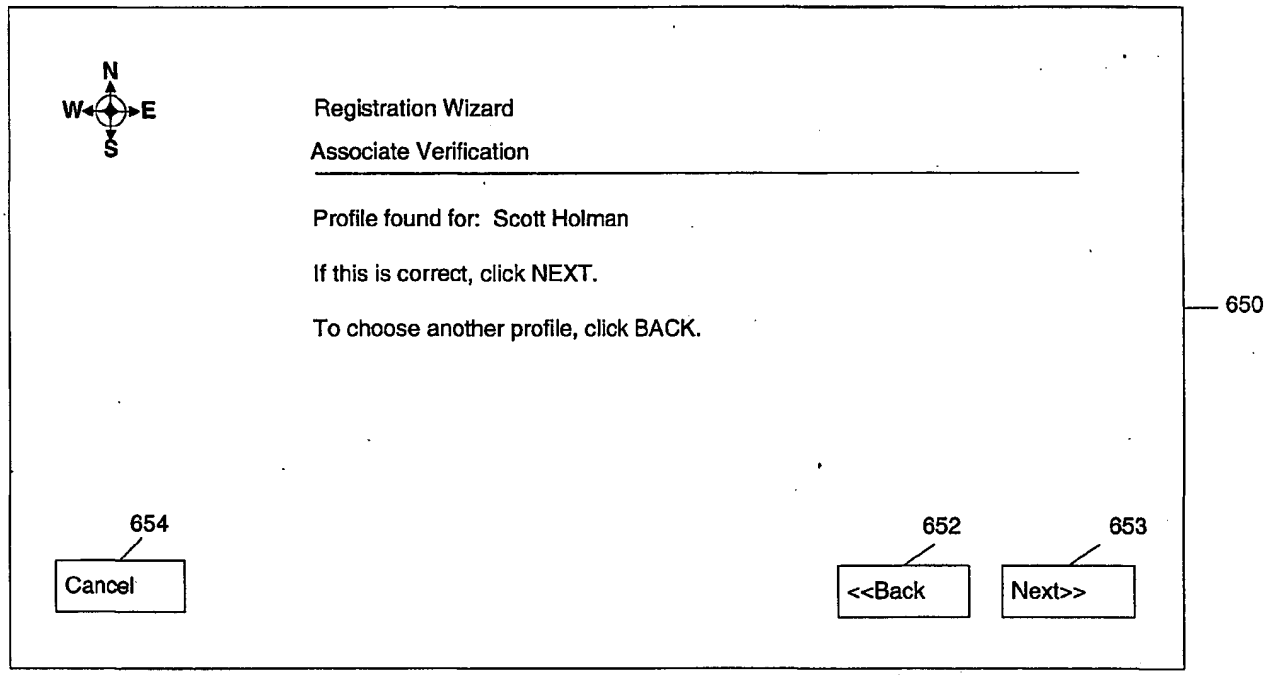

N
W
E
S
Registration Wizard
Associate Verification
Profile found for: Scott Holman
If this is correct, click NEXT.
To choose another profile, click BACK.
650
654
Cancel
652
<<Back
653
Next>>

Figure 8b

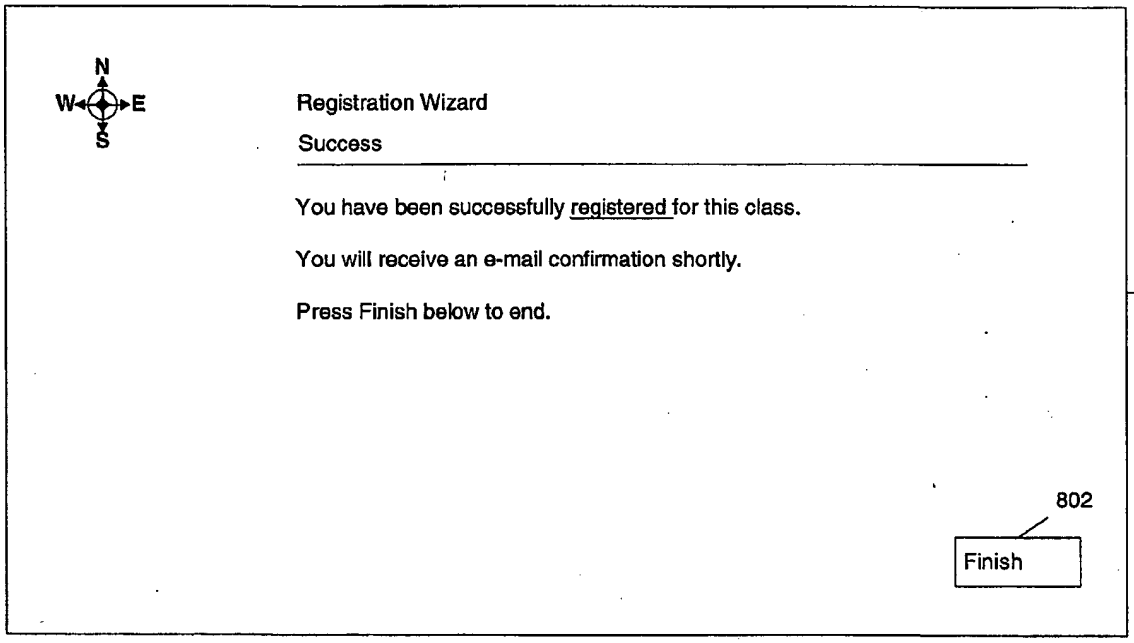
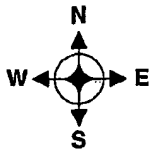

N
W
E
S
Registration Wizard
Success
You have been successfully registered for this class.
You will receive an e-mail confirmation shortly.
Press Finish below to end.
800
802
Finish

Figure 10

Participant
From: Company Administrator
Sent: Wednesday, May 17, 20000 5:10 p.m.
To: Participant
Subject: Course Registration



Company University
Registration Confirmation

You are **ENROLLED TO ATTEND** the following class:

Know Your Business

Which meets on the following date(s) and times:

Tuesday, September 19 8:00am - 5:30pm
Wednesday, September 20 8:00am - 5:30pm
Thursday, September 21 8:00am - 5:00pm

at the **Richmond** location.

Don't forget to add this class to your Calendar so you won't miss it!

To make changes to your enrollment or your profile at any time, please visit the Company website by clicking **here**

Thanks for registering!

FIGURE 11

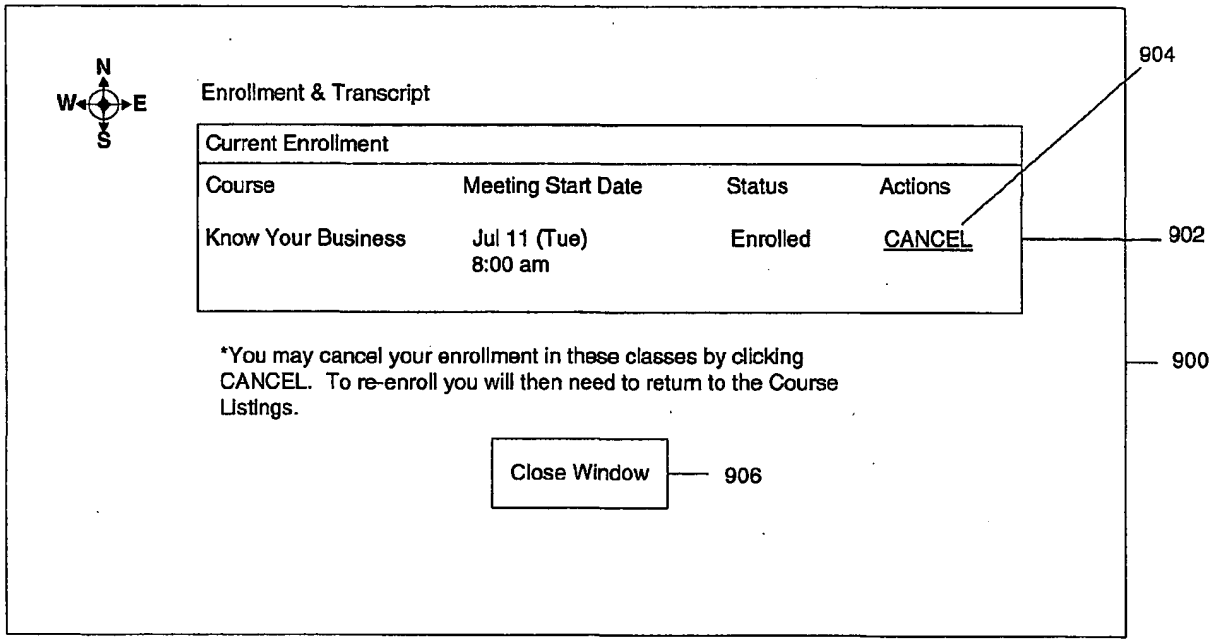

N
W
E
S
Enrollment & Transcript
Current Enrollment
Course
Meeting Start Date
Status
Actions
Know Your Business
Jul 11 (Tue)
8:00 am
Enrolled
CANCEL
*You may cancel your enrollment in these classes by clicking CANCEL. To re-enroll you will then need to return to the Course Listings.
Close Window
904
902
900
906

Figure 12

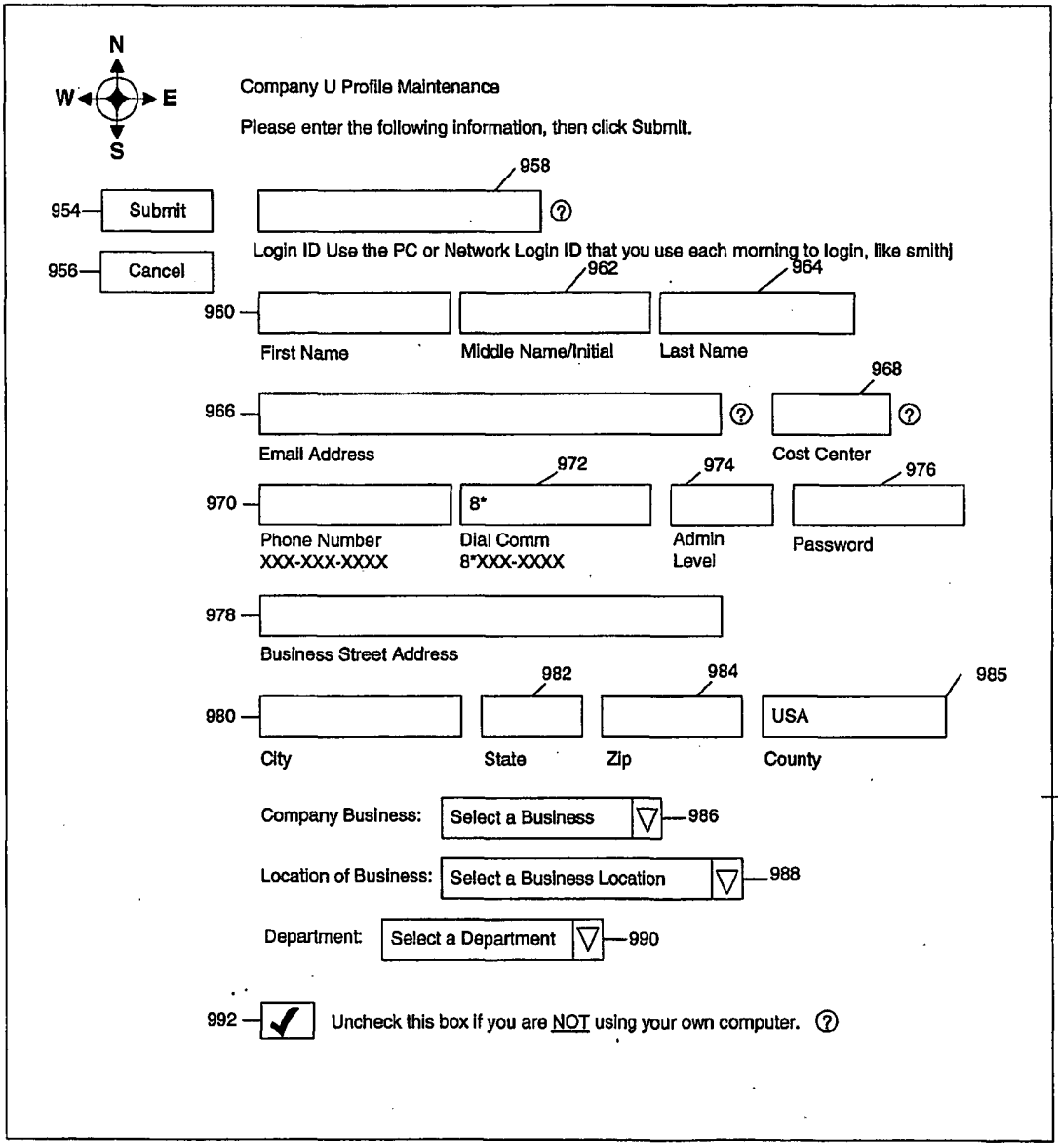

N
W
E
S
Company U Profile Maintenance
Please enter the following information, then click Submit.
954
Submit
956
Cancel
958
Login ID Use the PC or Network Login ID that you use each morning to login, like smithj
960
962
964
First Name
Middle Name/Initial
Last Name
966
968
Email Address
Cost Center
970
972
974
976
8*
Phone Number XXX-XXX-XXXX
Dial Comm 8*XXX-XXXX
Admin Level
Password
978
Business Street Address
980
982
984
985
USA
City
State
Zip
County
952
Company Business:
Select a Business
986
Location of Business:
Select a Business Location
988
Department:
Select a Department
990
992
Uncheck this box if you are NOT using your own computer.

Figure 13

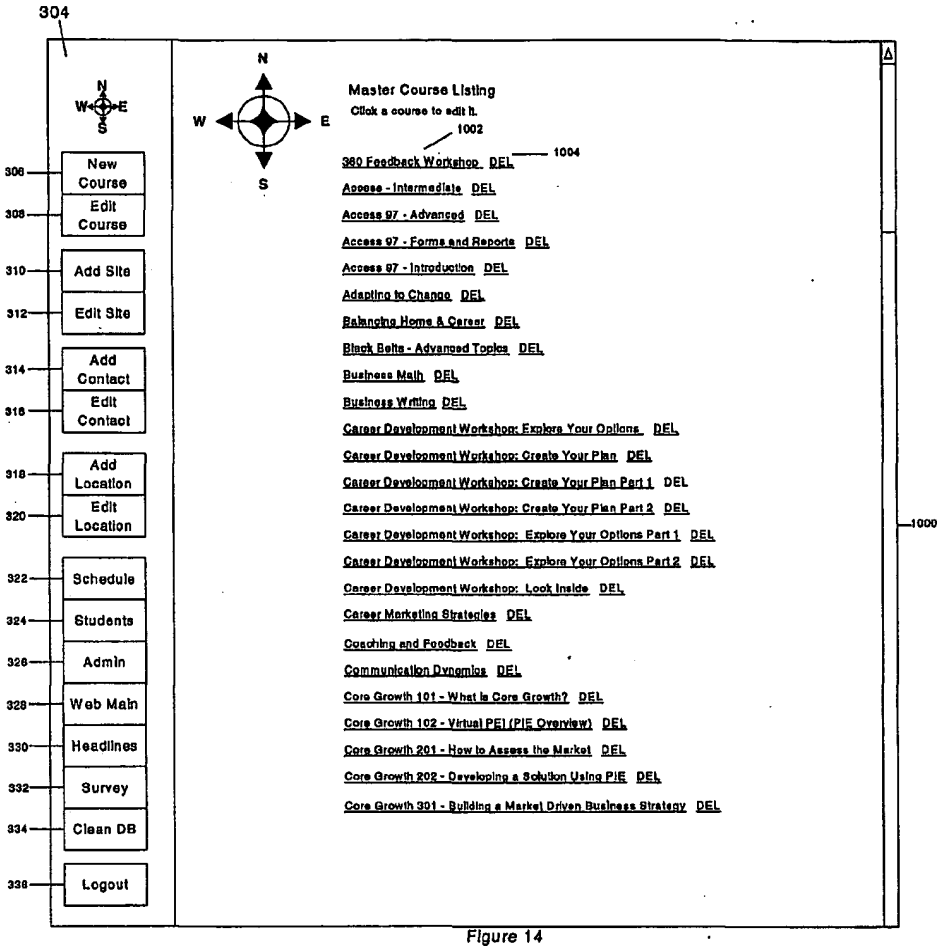

304
N
W
E
S
306 New Course
308 Edit Course
310 Add Site
312 Edit Site
314 Add Contact
316 Edit Contact
318 Add Location
320 Edit Location
322 Schedule
324 Students
326 Admin
328 Web Main
330 Headlines
332 Survey
334 Clean DB
338 Logout
Master Course Listing
Click a course to edit it.
1002
1004
360 Feedback Workshop DEL
Access - Intermediate DEL
Access 97 - Advanced DEL
Access 97 - Forms and Reports DEL
Access 97 - Introduction DEL
Adapting to Change DEL
Balancing Home & Career DEL
Black Belts - Advanced Topics DEL
Business Math DEL
Business Writing DEL
Career Development Workshop: Explore Your Options DEL
Career Development Workshop: Create Your Plan DEL
Career Development Workshop: Create Your Plan Part 1 DEL
Career Development Workshop: Create Your Plan Part 2 DEL
Career Development Workshop: Explore Your Options Part 1 DEL
Career Development Workshop: Explore Your Options Part 2 DEL
Career Development Workshop: Look Inside DEL
Career Marketing Strategies DEL
Coaching and Feedback DEL
Communication Dynamics DEL
Core Growth 101 - What is Core Growth? DEL
Core Growth 102 - Virtual PEI (PIE Overview) DEL
Core Growth 201 - How to Assess the Market DEL
Core Growth 202 - Developing a Solution Using PIE DEL
Core Growth 301 - Building a Market Driven Business Strategy DEL
1000

Figure 14

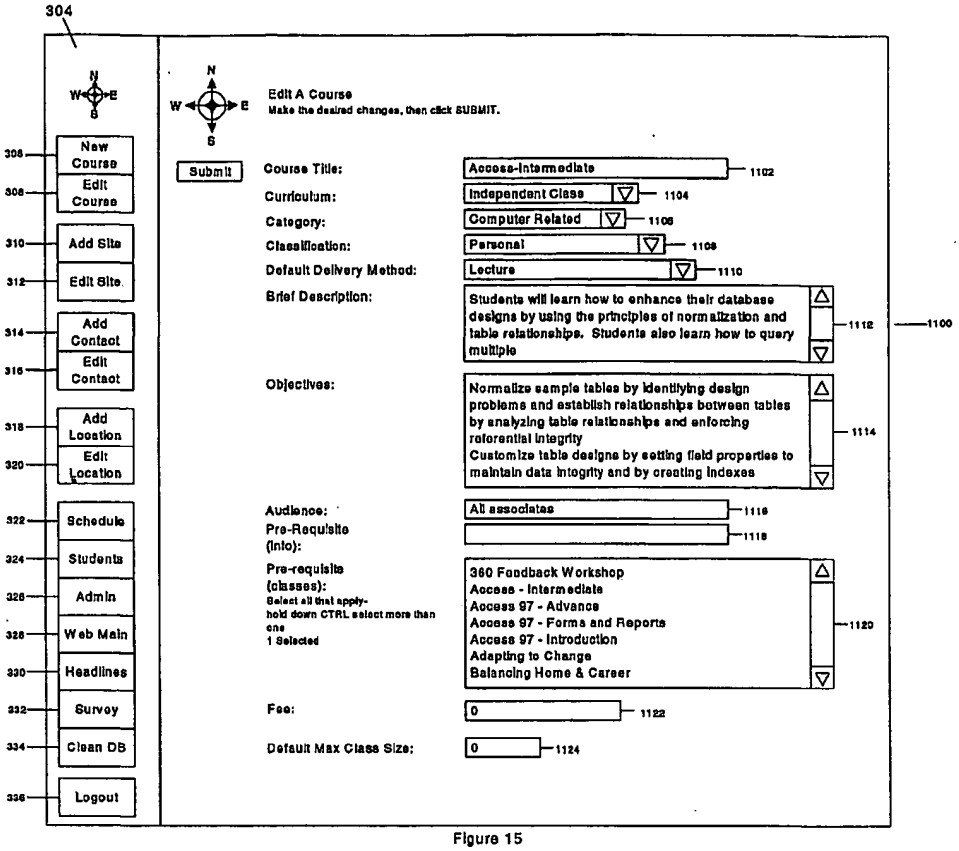

304
N
W
E
S
New Course
Edit Course
Add Site
Edit Site
Add Contact
Edit Contact
Add Location
Edit Location
Schedule
Students
Admin
Web Main
Headlines
Survey
Clean DB
Logout
308
306
310
312
314
316
318
320
322
324
326
328
330
332
334
336
Edit A Course
Make the desired changes, then click SUBMIT.
Submit
Course Title:
Access-Intermediate
1102
Curriculum:
Independent Class
1104
Category:
Computer Related
1106
Classification:
Personal
1108
Default Delivery Method:
Lecture
1110
Brief Description:
Students will learn how to enhance their database designs by using the principles of normalization and table relationships. Students also learn how to query multiple
1112
1100
Objectives:
Normalize sample tables by identifying design problems and establish relationships between tables by analyzing table relationships and enforcing referential integrity
Customize table designs by setting field properties to maintain data integrity and by creating indexes
1114
Audience:
All associates
1116
Pre-Requisite (info):
1118
Pre-requisite (classes):
Select all that apply- hold down CTRL select more than one
1 Selected
360 Feedback Workshop
Access - Intermediate
Access 97 - Advance
Access 97 - Forms and Reports
Access 97 - Introduction
Adapting to Change
Balancing Home & Career
1120
Fee:
0
1122
Default Max Class Size:
0
1124

Figure 15

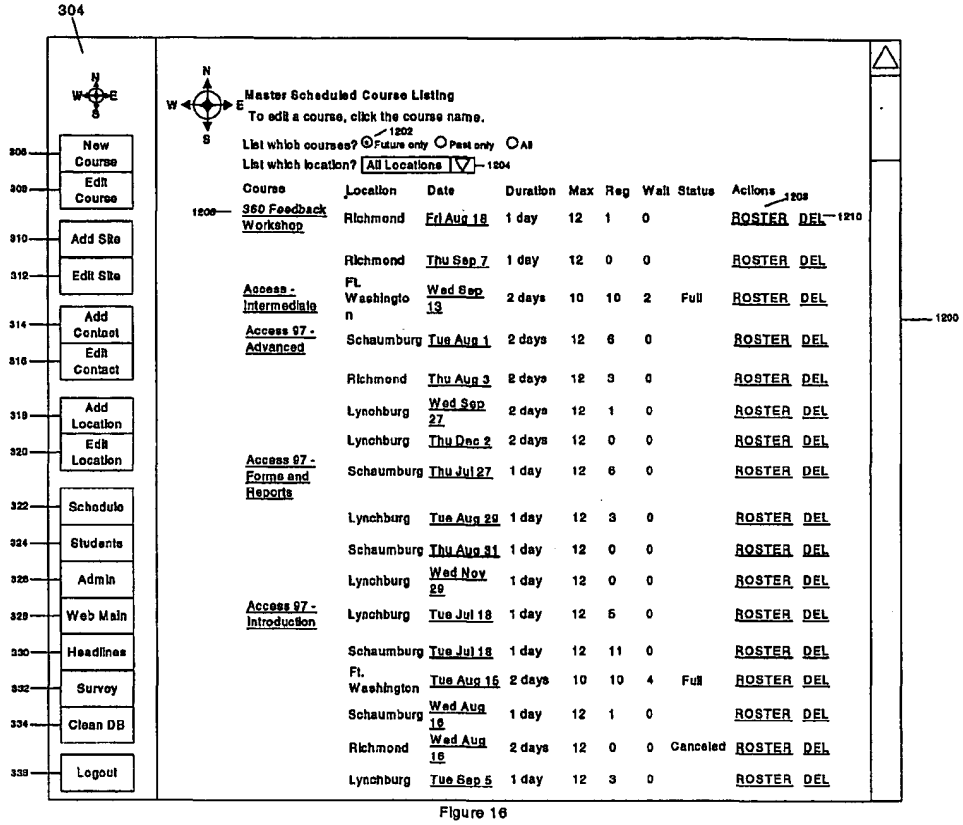

304
New Course
Edit Course
Add Site
Edit Site
Add Contact
Edit Contact
Add Location
Edit Location
Schedule
Students
Admin
Web Main
Headlines
Survey
Clean DB
Logout
306
308
310
312
314
316
318
320
322
324
326
328
330
332
334
336
Master Scheduled Course Listing
To edit a course, click the course name.
List which courses? Future only Past only All
List which location? All Locations
1202
1204
1206
1208
1210
1200
Course Location Date Duration Max Reg Wait Status Actions
360 Feedback Workshop Richmond Fri Aug 18 1 day 12 1 0 ROSTER DEL
Richmond Thu Sep 7 1 day 12 0 0 ROSTER DEL
Access - Intermediate Ft. Washington Wed Sep 13 2 days 10 10 2 Full ROSTER DEL
Access 97 - Advanced Schaumburg Tue Aug 1 2 days 12 6 0 ROSTER DEL
Richmond Thu Aug 3 2 days 12 3 0 ROSTER DEL
Lynchburg Wed Sep 27 2 days 12 1 0 ROSTER DEL
Lynchburg Thu Dec 2 2 days 12 0 0 ROSTER DEL
Access 97 - Forms and Reports Schaumburg Thu Jul 27 1 day 12 6 0 ROSTER DEL
Lynchburg Tue Aug 29 1 day 12 3 0 ROSTER DEL
Schaumburg Thu Aug 31 1 day 12 0 0 ROSTER DEL
Lynchburg Wed Nov 29 1 day 12 0 0 ROSTER DEL
Access 97 - Introduction Lynchburg Tue Jul 18 1 day 12 5 0 ROSTER DEL
Schaumburg Tue Jul 18 1 day 12 11 0 ROSTER DEL
Ft. Washington Tue Aug 15 2 days 10 10 4 Full ROSTER DEL
Schaumburg Wed Aug 16 1 day 12 1 0 ROSTER DEL
Richmond Wed Aug 16 2 days 12 0 0 Canceled ROSTER DEL
Lynchburg Tue Sep 5 1 day 12 3 0 ROSTER DEL

Figure 16

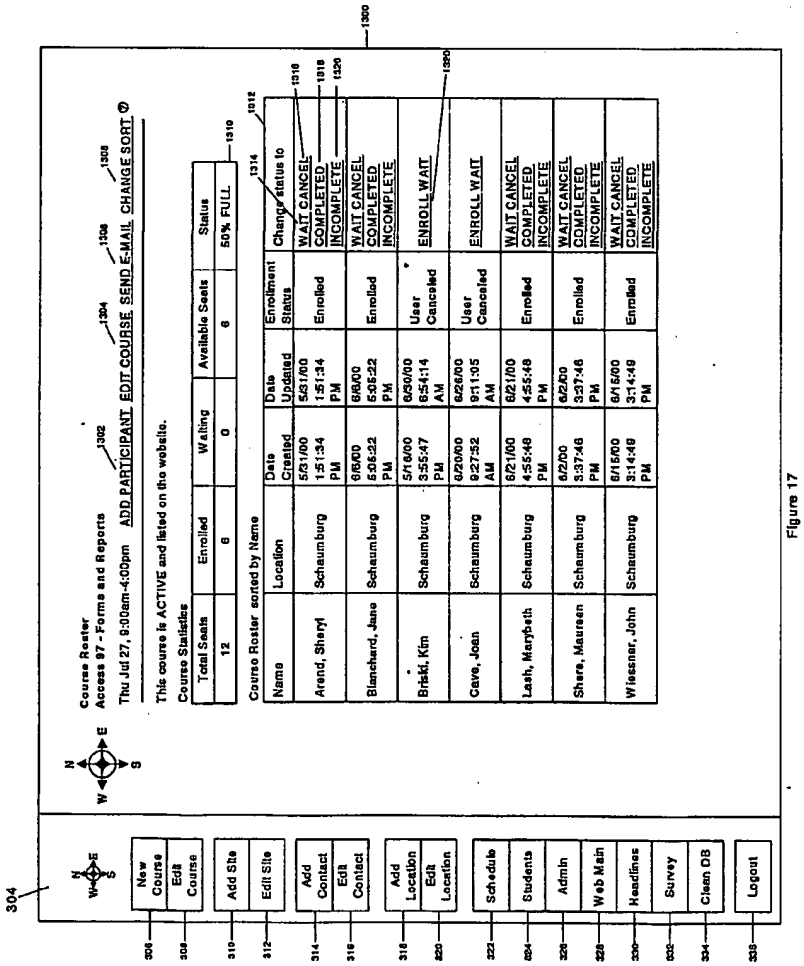

304
New Course
Edit Course
Add Site
Edit Site
Add Contact
Edit Contact
Add Location
Edit Location
Schedule
Students
Admin
Web Main
Headlines
Survey
Clean DB
Logout
Course Roster
Access 97 - Forms and Reports
Thu Jul 27, 9:00am-4:00pm
1302
ADD PARTICIPANT
EDIT COURSE
1304
SEND E-MAIL
1306
CHANGE SORT
1308
This course is ACTIVE and listed on the website.
Course Statistics
Total Seats
Enrolled
Waiting
Available Seats
Status
12
6
0
6
50% FULL
1310
Course Roster sorted by Name
1312
1314
1316
1318
1320
1300
Name
Location
Date Created
Date Updated
Enrollment Status
Change status to
Arend, Sheryl
Schaumburg
5/31/00 1:51:34 PM
5/31/00 1:51:34 PM
Enrolled
WAIT CANCEL
COMPLETED
INCOMPLETE
Blanchard, Jane
Schaumburg
6/6/00 5:05:22 PM
6/6/00 5:05:22 PM
Enrolled
WAIT CANCEL
COMPLETED
INCOMPLETE
Briski, Kim
Schaumburg
5/16/00 3:55:47 PM
6/30/00 6:54:14 AM
User Canceled
ENROLL WAIT
1322
Cave, Joan
Schaumburg
6/20/00 9:27:52 AM
6/26/00 9:11:05 AM
User Canceled
ENROLL WAIT
Lash, Marybeth
Schaumburg
6/21/00 4:55:48 PM
6/21/00 4:55:48 PM
Enrolled
WAIT CANCEL
COMPLETED
INCOMPLETE
Shara, Maureen
Schaumburg
6/2/00 3:37:46 PM
6/2/00 3:37:46 PM
Enrolled
WAIT CANCEL
COMPLETED
INCOMPLETE
Wiessner, John
Schaumburg
6/15/00 3:14:49 PM
6/15/00 3:14:49 PM
Enrolled
WAIT CANCEL
COMPLETED
INCOMPLETE

Figure 17

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US01/27412

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G06F 17/60
US CL : 705/1,8;345/334;434/335,350;709/227-229

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
U.S. : 705/1,8;345/334;434/335,350;709/227-229

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EAST, Dialog

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6,016,335 A (LACY et al) 18 January 2000 (18.01.2000).	1-60
A	US 6,064,977 A (HAVERSTOCK et al) 16 May 2000 (16.05.2000).	1-60
A,P	US 6,216,164 B1 (ZAREMBA) 10 April 2001 (10.04.2001).	1-60
A,P	US 6,170,014 B1 (DARAGO et al) 02 January 2001 (02.01.2001).	1-60
T,E	US 2001/0044728 A1 (FREEMAN et al) 22 November 2001 (22.11.2001).	1-60
T,E	US 2001/0044833 A1 (EISENDRATH et al) 22 November 2001 (22.11.2001).	1-60
A	Chamine, Shizard. Making your intranet an effective HR tool. HR Focus, Dec. 1998, v75, n12, pp: 11-12.	1-60
A	Business Wire. HighTechCampus.com selects Akili to build e-business architecture to support up to 25,000 simultaneous users. Business Wire, Mar. 8 2000, pp: (2).	1-60
T	Business Wire. PeopleSoft 8 student administration gains rapid market acceptance; Leading universities worldwide select Pure Internet Solution. Business Wire, Oct. 29 2001, pp: (2).	1-60

☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search
29 November 2001 (29.11.2001)

Date of mailing of the international search report
26 DEC 2001

Name and mailing address of the ISA/US
Commissioner of Patents and Trademarks
Box PCT
Washington, D.C. 20231
Facsimile No. (703)305-3230

Authorized officer
Tariq Hafiz

Telephone No. (703) 305-3900

Form PCT/ISA/210 (second sheet) (July 1998)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US01/27412

C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	PR Newswire. Saba software releases EMS 3.1. PR Newswire, Nov. 1998, pp: (2).	1-60